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PHILADELPHIA, OCTOBER 6, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SOME OF THE RELATIONS WHICH MALARIAL AFFECTIONS AND TYPHOID FEVER BEAR TO EACH OTHER.

*Delivered at the Hospital of the University of Pennsylvania,
September 15, 1883,*

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of, and Professor of Clinical Medicine in, the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I shall ask you to observe with me to-day, even though in a somewhat superficial and cursory manner, several cases which are at present in the wards, for, if I do not take advantage of this opportunity, I may not soon again have the chance of presenting a group of fever-cases which illustrate in a very interesting manner, in the first place, the completely distinct character of malarial and typhoid affections; in the second place, the manner in which malarial affections sometimes resemble typhoid fever; and, in the third place, some of the ways in which typhoid fever and malarial affections may be associated. I do not intend to go into any detailed discussion of the treatment of these cases, but shall rather occupy myself in showing you, in a cursory way, the general course of the cases, and some of the general diagnostic features.

BILIOUS REMITTENT FEVER.

The first patient is W. C., 39 years of age, born in Scotland, but came to this country when a child. For four years he has been tramping about the country; his real occupation, however, being that of a boiler-maker. He has been a heavy drinker, chiefly of beer. Fifteen years ago, while in the navy, he had intermittent fever. Since that time, he has had some return of the malarial fever every fall. This tendency to return at certain periods of the year is a peculiar and characteristic feature of malarial affections. A man who has once had a severe attack of malarial fever may, although entirely cured of the original attack, exhibit in successive years, and especially during the spring and fall, a tendency to a return of the trouble. On

the 16th of August he went to work, and continued to work until the 28th of the same month. In the afternoon of this day he had a chill, followed by fever and sweating. The next morning he was chilly, with frontal headache, severe pain across the loins, nausea, vomiting, and gastric distress. He remained in bed. Since then, he has not had a regular chill, but has had irregular fever, the temperature being highest in the evening and lowest in the morning, fever, however, being always present, with derangement of the stomach and thirst. There has been no diarrhoea, no bleeding from the nose, and no delirium. He has had a great deal of headache, which has been worse in the evening when the temperature is the highest. When admitted, his temperature was 104° , the face flushed, the conjunctiva slightly yellowish, the tongue foul, with a yellow coat and disposed to be dry in the middle as he lay with his mouth open; there was no appetite; vomiting occurred whenever anything was taken into the stomach; there was a great deal of nausea, no diarrhoea, a little distention of the belly, and no eruption. The spleen was twice its normal size, but the liver was not materially enlarged. There was impaired expansion at the base of both lungs, with some gurgling râles.

There has been, then, the history of an old malarial affection, recurring every year, and of an acute attack of fever, which, when he was admitted, had lasted nine days, and which did not present the characteristic features of typhoid fever, but rather those of bilious remittent fever.

Typhoid fever comes on slowly. There are several days during which the patient feels poorly. This man had a distinct chill on the afternoon of the day on which he had felt perfectly well in the morning. In typhoid fever, there may be vomiting early, but there is no marked tendency to vomiting. There is loss of appetite, the tongue is coated, but the gastric symptoms are not severe, while, on the other hand, the belly is distended, and there is a tendency to diarrhoea. This man has had marked gastric symptoms, heavily-coated tongue, nausea, persistent vomiting, but no diarrhoea. In typhoid fever, epistaxis is common. It has not been present in this case. In the second week of typhoid fever, nervous symptoms are usually developed; there is slight wander-

ing, restless sleep, with, perhaps, delirium at night, causing the patient to leave the bed. This man has had nothing of the kind. Headache is common to both, and will not aid in the diagnosis. In typhoid fever, the spleen is enlarged, but only moderately so. It is rarely, and certainly not so early in the disease, enlarged to the extent that we find it here. About the seventh day of typhoid fever, an eruption appears. This man has had no eruption. The course of typhoid fever is not positively affected by treatment. I shall show you that we have quickly brought about a cessation of this man's fever by specific treatment.

You see, then, the marked diagnostic features which separate this case of bilious remittent fever from a case of typhoid fever.

The treatment, in brief, was as follows. On admission, he received nine grains of blue mass, followed by a laxative. This produced a moderate movement of the bowels. He then took twenty grains of sulphate of quinine a day, and immediately his fever broke, and on the second day he was entirely free from fever, the temperature being 98.4° : in other words, specific treatment produced specific results. In typhoid fever, that, or any other amount of quinine which you could give, would not bring down the fever. It would prevent it from soaring to a high point, but it would not stop it altogether. But when, encouraged by finding the temperature fall to 98° , we reduced the dose of quinia to six grains, the fever immediately went up again to 102.5° . A large dose of quinia again brought it down. The remedy was then continued in gradually diminishing doses to the present time. The man has had no fever for several days, and is now practically convalescent.

I would also remark that this man, whose system is so fully impressed with the malarial poison, will require prolonged anti-malarial treatment. I shall insist that for several months he shall take sulphate of cinchonidia conjoined with arsenious acid and iron, and that for several years to come he shall, at the approach of each spring and fall, take anti-periodic doses of cinchonidia and then continue the remedy in smaller doses for some months; and every spring and fall for four or five years after this, he shall take arsenious acid. In this way the rem-

nant of malarial poison will be eradicated from his system.

MALARIAL FEVER FOLLOWED BY TYPHOID FEVER.

Our second patient is 21 years old; was born in England, and came to this country about a year ago. Last spring, he was working in Bucks county, in a highly malarious district, and was much exposed to damp and cold. While working out in the country he felt dull, had occasional headache and costive bowels. He also states that he had a ravenous appetite. Soon after this he went to work in Darby, and was there taken sick with quotidian intermittent, and for several days he had each day a chill followed by fever and sweating. He, unfortunately, did not attend to this, and it passed into what appeared to be a remittent fever. This remittent fever being partly checked by quinia, left the man with a continued fever. It was clear that this man, whose system was impregnated with malarial poison, had contracted a mild typhoid fever. He was admitted to the hospital on September 10; on the 11th, a crop of rose-colored spots appeared on the abdomen; another crop came out on the 14th. On admission his face was flushed, there was some cough, and he was disposed to sweat. When the finger was drawn across his forehead or chest, a red streak was left; the bowels were distended, there was gurgling in the right iliac fossa, general soreness over the abdomen, the tongue was dry, brown in the centre, and tremulous; there was no appetite, but the stomach retained the light nourishment that was allowed; there has been broken sleep, but no delirium until last night; there has been no special complaint of headache; there is slight enlargement of the spleen, and congestion of the roots of both lungs, with moist râles; a faint blood-murmur is heard over the heart. His temperature has been extremely uniform for some time past, varying from 102.2° to 103.5° ; the fluctuations have not been more than three-fourths of a degree. In the previous case of remittent fever, the fluctuations were very marked. This is not to say that there may not be decided remissions in typhoid fever. The course of temperature in typhoid fever is something like the following: the person may feel poorly for four or five days, and have distinct fever, probably with a temperature of 101° ; the

next morning it may be 101.5° , in the evening it may reach 102° ; by the seventh day it will probably be about 101.5° or 102° ; for the next eight or nine days the temperature keeps mounting up, being a little higher each evening and a little lower in the morning, but not as low as on the previous morning—there may be a variation of one and a half or two degrees between the morning and the evening temperatures. During the third week the temperature is pretty uniform; during the fourth week the temperature drops in the same way as it ascended, so that by the close of the fourth week, if there is no complication, the patient is free from fever.

This man came to us with a history of an irregular fever of an uncertain duration; it is therefore difficult to say at what period of the disease we have our patient. The only thing that we can say is that he is still at the period at which eruption comes out. The detection of an eruption is a matter of the greatest importance. When you observe how the system may be affected by malaria, and then have typhoid fever grafted upon the previous disease,—when you reflect on the irregular course which remittent fever pursues, and when we come to see how closely catarrhal fever may imitate typhoid, you will recognize that the finding of an eruption is, as I have said, a matter of the greatest importance. These spots are of a rose-color; they are separate; their shape is oval, and they vary in length from one-twelfth to one-sixth of an inch; they are not at all, or very slightly, elevated above the surface. Sometimes, if the touch be delicate, the finger may detect that there is a slight elevation; when pressed upon, they entirely disappear; when the pressure is taken away, they soon return. The eruption is found for the most part on the belly, and on the lower part of the chest; but I have seen it on the arms and legs when it could not be found on the belly, and have found it on the back when it existed on no other part of the body. In the vast majority of cases, however, it makes its appearance first, and often only, and continues longest, over the belly and the lower part of the thorax. It usually makes its first appearance about the seventh day of the disease; it does not all come out at once, but it appears in successive crops; there may be five or six or fifteen or twenty spots in

each crop. The spots continue to come out as long as the disease is in actual progress; as a rule, no more come out after the end of the third week, unless the case is going to be an irregular and prolonged one.

In a case like the present one, in which there is a distinct history of a malarial fever, followed by an irregular sort of remittent fever which has continued to the present time, the question to be decided is whether this man has remittent or typhoid fever. The onset was like that of malarial fever. There has been very little gastric disturbance. There has been delirium. The remissions have not been so marked as in the previous case of remittent fever. There has been continued fever. The man has had a cough, but this might exist in remittent fever. There has been no epistaxis; he has not had distention of the belly, nor diarrhoea; but none of these are constant in typhoid cases. If we had any doubt as to the diagnosis, we certainly had none after we found the specific eruption.

In examining the abdomen of a patient for the typhoid eruption, you will, particularly in hospital patients, often find other eruptions which are not to be confounded with that due to typhoid fever. There may be little pimples; these are papular and elevated above the skin. There may be an eruption due to the bites of mosquitoes, fleas, bedbugs, or other insects; these all have a little central opening, where the irritating matter was deposited. They are elevated, do not entirely disappear on pressure, and are not rose-colored.

This patient is passing through an ordinary mild case of typhoid fever. His temperature has never been above 103.5° ; there have been no severe nervous symptoms, no profuse epistaxis, and no vomiting. To-day he has a copious perspiration, and I think that this will be a short case of typhoid fever.

In the treatment of this patient we have not employed the large doses of quinia which we did in the previous man, for they would have had no specific effect. He has, however, received a larger amount than he otherwise would, because he has had malaria. He has taken twelve grains of quinia, with mineral acid, every day, receiving two grains of quina sulphate and five drops of dilute hydrochloric acid every four hours. He has been kept in bed, and has been given an absolutely liquid diet. As you know,

there is in this disease ulceration of the lower part of the small intestine, and if irritating or indigestible articles of food are given, perforation and death may ensue even in mild cases; so that the study of the course of the disease and a recognition of its true character is not only a matter of interest, but may be a question of life or death to the patient. So important is this that if I were not quite certain as to the nature of the disease I should put the man on large doses of quinine, as a therapeutic test, and continue it for two or three days. If a rapid fall in the temperature to 98° did not take place, I should treat the case as one of typhoid fever. It is in these mild cases particularly that the friends of the patient are anxious that he should be allowed to get out of bed and take injudicious articles of food. If you yield to their solicitations, the patient may have a sudden pain in the right side, enormous distention of the belly, a running pulse, constant vomiting, and be dead within twelve hours. It is in these mild cases that indiscretions in diet are more likely to be allowed, and therefore it is that a study of the diagnosis is doubly important.

UNCOMPLICATED TYPHOID FEVER.

Our next patient, M. L., is a Russian, 22 years of age. He came to America three years ago. His history and habits are good, but he lives in a very malarious district. Three years ago, he suffered from sunstroke, but recovered. Two years ago, he had a severe attack of intermittent fever, lasting for six months. Two weeks before admission, he began to feel heavy, dull, indisposed to work, had vague pains, occasional bleeding of the nose, and failure of appetite. The symptoms gradually became more marked until the 25th of August, when he felt very ill, had headache, complete loss of appetite, and his bowels were purged to an unusual extent by a small dose of laxative. This was followed by diarrhoea. He continued to grow worse, and was brought to the hospital on the last day of August and about the eleventh day of the disease. He had all the symptoms of typhoid fever.

On admission, he was given quinine and dilute hydrochloric acid. He was put to bed, given a liquid diet and one or two small doses of opiates. Under this treatment the man has progressed in the most satisfactory manner. On admission, his temperature was 105° . The remissions

were very marked, sometimes being as much as three degrees between the morning and evening temperatures. The temperature has steadily come down. On September 5 the temperature was 101° , and on the 8th, the twentieth day of the disease, it was down to normal for the first time. On one day there was a rise to 100° ; but practically he has been free from fever for about a week.

This has been an uncomplicated case of typhoid fever, with a slow onset, with vague symptoms, lassitude, increasing debility and loss of appetite, occasional epistaxis, headache; then more marked fever, and finally such debility that he had to go to bed, and then appeared the fully-developed train of symptoms. This case has run a mild and perfectly satisfactory course, terminating in recovery at rather an early period. Although this man has been watched very carefully since admission, we have been unable to discover any eruption. It is possible that the eruption may have been present and disappeared before he was brought here; but with a history so distinct as this was we did not need the eruption to make the diagnosis. Let me here impress upon you the fact that the eruption, although a very characteristic and a very common symptom, is not absolutely necessary; and, indeed, there is no symptom in any disease that is absolutely necessary. The eruption occurs in perhaps ninety or ninety-five per cent. of all cases of typhoid fever. It is peculiar in the fact that mild cases may have the most eruption. I have seen a person, with the mildest form of typhoid fever, covered from head to foot with rose-colored spots; and, on the other hand, I have seen patients with severe and even fatal typhoid fever, with extensive intestinal ulceration, in whom the eruption was but slight. The amount of eruption bears no direct relation to the severity of the disease.

TYPHOID FEVER FOLLOWED BY MALARIAL FEVER.

Lastly, I shall show you a woman whose case has been a very interesting one. She was born in Ireland, and has been in this country only two months. She lives in this city. There has been no special sickness in the neighborhood where she lives. She has had all the fevers of childhood, except scarlet fever. She was admitted on August 15, and then stated that she had been taken sick five days previously.

She would now be at about the thirty-sixth day of her disease. The attack began with the well-recognized symptoms of typhoid fever, and followed a period of indisposition and weakness, with aching in the bones, and a little vomiting. On admission, the face was flushed, there was a yellow tinge to the conjunctivæ, the mind was dull, the belly distended, the tongue red and dry, and glazed rather than coated; no appetite, a great deal of pulmonary congestion, with moist bronchial râles everywhere, but no pneumonia; there was no eruption. She had irregular chilly feelings, with flushes of heat, but the fever continued pretty steadily; epistaxis recurred; the bowels were quiet, but when a small dose of a laxative was given she had eight loose, yellow stools. This illustrates a point in typhoid fever, that is, although there may be no actual diarrhœa, yet there is irritability and sensitiveness of the bowels; so that you may make use of this therapeutic test in cases in which there is doubt. In remittent fever, the bowels are usually, although not always, not only quiet but constipated, so that small doses of a laxative produce no effect.

The temperature on admission was 103° , and the pulse 120. This was, then, an ordinary case of typhoid fever. About the twentieth day of the disease, the fever began to fall, and by the twenty-third day the morning temperature was 99° , but in the evening it went up to 102° or 102.5° . The fluctuations between morning and evening were very marked, sometimes as much as four degrees. I should have stated that in the fourth week of typhoid fever there are marked vacillations in the temperature; but this is more than common. On the morning of September 5, the twenty-seventh day of the disease, the temperature was 98° , in the evening 101° ; the next morning it was 98° , that evening, 101° ; next morning 98.5° , evening, 99° ; the succeeding morning it was 99° , but in the evening it suddenly went up to 107° . The woman was very ill, the face was flushed, there was rapid action of the heart and excited pulse; but no local symptoms were present to explain this rapid rise. There was no pneumonia and no perforation of the bowel; a careful examination showed that this rapid rise was not dependent upon the development of any true inflammatory complication. I neglected to say that, for a few days be-

fore this, there had been a number of unhealthy-looking boils coming on her person. In a disease which is more or less putrid, as is typhoid fever, where there are a number of ulcers in the bowel throwing off infecting material, it is not impossible, and, indeed, it is not rare, to have a sort of septic poisoning, almost like pyæmia, develop. These boils suggested something of this kind. The rise of temperature was either due to pyæmia or was the result of an outbreak of malaria, or it was one of those anomalous ephemeral rises which may be found in the convalescence of a number of diseases. The course of the case soon showed that it was not pyæmic. The next morning the temperature was down to normal, and the patient was immediately placed on large doses of quinia. So far there has been no return of the fever. There was very little in this case to make one suspect that the woman was malarious; there was no history of malaria, she had only been in this country for two months, and had just come off the sea; she had not lived in a malarious district. We can, however, explain this sudden rise in no other way.

I have thus passed in rapid review these cases which illustrate some of the relations which exist between typhoid fever and malarial affections, have described the general course of the diseases, and have given you some of the diagnostic features.

ORIGINAL COMMUNICATIONS.

DIETETICS FOR THE SICK.

*Read before the Philadelphia County Medical Society,
September 12, 1883,*

BY CHARLES M. SELTZER, M.D.

IN presenting this paper it is but justice to state that it has been prepared during the leisure of the past week as a substitute for one by another member, who was unable to keep his engagement. The subject has been selected more with the hope of eliciting some practical ideas, and from the desire to emphasize its importance, than to announce anything new or to exhibit the best paces of a hobby. Close attention to the methods of our most successful general practitioners convinced me that in dietetics was their stronghold. At the same time there was plainly to be seen a distressing lack of knowledge as to variety

of foods and the preparation of them. In order to find out whether there was a practical remedy for these two great faults, I have gone over a thorough course of preparation of diet for the sick, under the instructions and guidance of Mrs. S. T. Rorer, in whom are combined the practical attributes of cook, chemist, physiologist, and nurse, and I can safely say that if every member of this Society were to do likewise, their armamentarium, success, and self-satisfaction in the practice of medicine would be increased manifold.

It would be almost an endless task to discuss the literature of this subject. Let us condense the opinions of physiologists, chemists, hygienists, and all others in authority, by stating that food is divided into nitrogenous or albuminous, hydro-carbons, or starch, sugar, and fats, and minerals or the various salts of the alkalies. Of these the nitrogenous and minerals are the building-materials, and the hydro-carbons are the heat- and force-producers. Food may also be classified into liquid, semi-solid, and solid, and, as the sum total of digestion is a matter of absorption and assimilation, it follows that the more liquid or dissolvable food is, the more readily will it be absorbed: hence this is the form to be chosen when it is desirable to obtain nourishment at the least possible expense of organic action. There are also conditions in which bulk and solidity are necessary, and here we select the semi-solid or solid food, or even indigestible matter.

Nitrogenous food, in its natural combination with mineral matters, is mostly made absorbable by stomachic digestion: it rebuilds the tissues, and the waste and refuse are excreted by the kidneys and skin as urea and uric acid and its salts.

Hydro-carbons are digested in the mouth and small intestines, are burnt up by union with the respired oxygen, thus supplying heat and force to the body. The waste and refuse are excreted by the lungs and bowels.

About three ounces of nitrogenous and twenty ounces of carbonaceous food are necessary to sustain the life of an adult man in idleness. With these epitomized facts in mind, let us consider the importance and use of dietetics in the treatment of disease. The importance has been signalized by Bence Jones, who has said that the effect of diet is far beyond any known remedy. This fact has been so well known

for the past century that volume after volume has been written on "Dietetics," "Diet Cures," etc. A few of these have become standard works of authority, because of their scientific and exhaustive treatment of the subject, while hundreds of others have had but an ephemeral existence. All have had to reiterate the same facts, because very few new ones have been learned, and, aside from the knowledge of artificially-digested food, the student of a hundred years ago knew as well as the student of to-day about what diet was necessary for the sick. True, theirs was an empirical teaching: they knew nothing of the physiological actions of diastase, pepsin, and pancreatin, but they were all the more practical for that. Our present scientific reasonings on digestion are but the formulation of rules and theories for very old facts. The importance of the subject is made more manifest when we consider how much of the sickness that we are called upon to treat is the result of some error in eating or drinking, and, as "removal of the cause" is the first step towards the promotion of recovery, it is easy to perceive how essential it is to know what constitutes proper and improper diet. Life depends upon diet, and the restoration of health depends upon the same principles as its preservation. Disease is the result of the violation of the laws of health; hence the first step towards recovery is to re-establish those laws; and, as the material for repair and support must come from diet, we, as thorough physicians, should have a complete *practical* knowledge of dietetics and a proper appreciation of their curative value. But almost a decade of experience among physicians compels me to acknowledge that this is not the case, and that the most lamentable deficiency is in the practical application of the subject. Nature's simple and easily-understood remedies are either lost sight of or ignored in the blind endeavor to find a medical specific for every human ill, or to establish an ideal notion, theory, or pathy. For the treatment of chronic affections, some good points may occasionally be gained by even observing the *modus operandi* of quacks, homœoquacks, and proprietary medicines, for in connection with either a depurative or inoperative preparation, such dietetic and hygienic directions are almost invariably *insisted* upon as would in themselves relieve tem-

porarily, and perhaps permanently, some of the most obstinate cases.

The methods of dietetic treatment of diseases are as various as are the ills that flesh is heir to, but all of them contain some of the following principles as essential features. In acute diseases, *rest* is of primary importance; it is the fundamental principle of their medical and surgical treatment, and the same idea must be carried out in dietetics by remembering what part each organ serves in absorption, assimilation, and excretion, and by avoiding such food as would cause the performance of that function. Of course this plan is only to be pursued while the disease is advancing, and as soon as recovery begins there must be a gradual return to a promiscuous diet, very little at first, just enough to slightly exercise the crippled organ, using as great care as we would in instituting passive motion in a limb that has been fractured. Nature enforces this principle by the loss of appetite that marks the onset of nearly all acute diseases. The dietetic rest of an organ does not necessarily imply a depletory diet, for, while it is non-active, other organs may be made to perform a compensatory amount of work, and thus sustain or even increase the patient's vitality,—so great is the versatility of our organic functions. It is upon this idea that we must act when we obey the command of Graves to feed fevers. In chronic diseases—those in which the natural course is direct from bad to worse, until death or some interposing process puts an end to them—every organ must be made to do its utmost; the whole system must be awakened to the threatening destruction. Herein lies the broadest field of action for our subject. No time should be lost; food should be administered as frequently as assimilation and proper amount of organic rest will allow; the appetite should be kept active, by using liquid, semi-solid, and solid food, prepared in such a variety of ways as to allow no charge of monotony or disgust. Surprise is frequently a useful element. Instead of leaving the patient to vacillate over his or her likes and dislikes, the nurse should be privately instructed how and what to prepare for each time, and how to serve it in the most appetizing manner. A valuable aid, usually lost sight of, is condiment. Think but for a moment how a savory dish will sharpen our appetites while in health, and I am

sure you will perceive its stimulating influence upon a debilitated patient, to whom the flat and insipid preparations usually offered are loathsome or even nauseating. This disgust might frequently be avoided, and the amount of prescribed medicine be lessened. Many of the bitter tonics and carminatives of our *materia medica* are the same as are used in cookery, and are none the less efficacious in a palatable dish than in the nauseous pill or draught. Therefore let the delicate aroma of herbs, celery, and bay leaves pervade the soups; use India curry on starchy foods, and when desirable add *capsicum*, *piper nigrum*, etc., to animal broths and substances. In so doing, if necessary, you can satisfy the qualms of your professional dignity by remembering that in catering to the palate you reflexly stimulate the organs of digestion.

Some articles of diet may be administered simply for their curative effect. A five-ounce cup of strong coffee contains about sixty-six grains of extract, or an equivalent of about two grains of *caffeine*,—quite sufficient to relieve a neuralgia, or a headache and sick stomach after a dose of opium. Beef-tea made red-hot with red pepper is the very best treatment for delirium tremens. A patient to whom I once administered such a dose, made so strong that I would not have dared to taste it myself, afterwards told me that it was the most refreshing and *cooling* drink he had ever taken. A London surgeon to the police told me that he had treated a hundred and fifty cases of delirium tremens with this remedy *alone*, and had not lost one. The use of *chloral* in these cases is criminal, and many a death-certificate of “delirium tremens” ought to be “heart-failure from chloral-poisoning.” Mucilaginous teas and drinks made from gelatin, isinglass, Irish moss, and flaxseed are very soothing to any inflammation within the digestive tract. Green vegetables are necessary to cure as well as to prevent scurvy.

An old practitioner, who had spent his early professional life in the country, told me that when he first commenced practising he used all the ordinary remedies in typhoid fever without any satisfactory results, until the introduction of turpentine by the late Prof. George B. Wood. In it he soon discovered a useful ally, not so much in the drug *per se*, but because con-

venience and time compelled him to use a thick flour-gruel as a vehicle, and the patients were nourished sufficiently to live through the attack.

In the science and art of preparing sick-diet there is a most lamentable lack of knowledge, especially among physicians. They know the preparations by name, but not by nature, and the only way to learn the latter is to don the apron and take a practical course from a practical and scientific cook. Such a course was inaugurated last winter in this city and in Boston with a very satisfactory result. The prospect for this season in this city is that the course will be very well attended. It is the only way to learn. I could read you receipts by the score, but it would be as useless as reading off that many medical formulæ.

A CASE OF AMPUTATION OF THE BREAST, WITH REMARKS.

*Read before the Philadelphia County Medical Society,
September 12, 1883.*

BY HENRY LEAMAN, M.D.

MRS. J. J. W., æt. 48, married twenty-nine years, is the mother of eight children still living, and has been the subject of ten severe miscarriages. She presented herself at my office on the 1st of September, 1882, complaining of a tumor in her breast, which she had noticed for the first time three months previous. At that time a small pimple upon the surface of the skin served to call her attention to the swelling that lay beneath in the substance of her breast. Examination showed a tender enlargement, the size of an English walnut, situated deeply in the inner lower quarter of the left breast. She stated that during the past week she had experienced for the first time frequent sharp, retracting pains shooting through the nipple. Menstruation had ceased with her six years previous, without giving rise to any trouble. She now had no cachexia, and was apparently in her usual health.

On the 18th of the same month she called again; the growth had not perceptibly increased, but she spoke of having pain in her breast-bone. Amputation of the breast was recommended. The effect of this advice was to send her upon a blind pilgrimage through the desert of therapeutics. Now electricity, now pow-wow-ing, now homœopathy,—each in its turn was

tried, with results equally gratifying to the patient.

The ignis-fatuus which I had lighted brought her again to me on the 23d of April, 1883. The tumor then was of an oval shape, and about four inches in length. From its inner anterior surface were extending two cornua, slightly ulcerated, about three-fourths of an inch in length. The skin over the tumor was deeply congested, red, and inflamed, as was also the skin for several inches around. The tumor in front rested upon the cartilages of the rib, but was movable. The glands in the axilla were slightly involved. With the assistance of Drs. Hatfield, Brubaker, Welch, and R. Leaman, the breast was removed under the spray, on April 26, 1883, and Lister's dressing applied.

One nodule of hardness was removed from the axilla. At the sternal end the cut surfaces could not be approximated within two inches, owing to the necessary ablation of tissue.

On May 8, the posterior three-fourths of the incision had entirely healed and were healthy. The anterior one-fourth was perfectly healthy and granulating rapidly. All sutures and the remaining ligatures were removed.

On and after May 10, the wound was dressed with iodoform, cosmoline, and salicylated cotton, under which treatment the wound rapidly healed. Dr. Brubaker made a histological study of the growth, and pronounced it carcinoma.

As soon as the cicatrix was complete, neuralgic pains began to be felt in the left arm, right leg, and body. At first the cicatrix remained perfectly healthy in appearance. Subsequently, however, a nodule appeared in the lower part of the neck behind the left sterno-clavicular articulation. Next, the left axilla, the posterior and healthy part of the cicatrix, both began to show hardening. At present there is a chain of nodules along the whole cicatrix,—one large and painful is felt over the cartilage of the third rib on the left side. The left axilla is but one hard pyramid. The left hand and arm are swollen. A pain of a lancinating, burning character is referred to the left scapula, arm, and axilla, occasionally shooting in the course of the incision.

The apparent freedom from involvement of the axillary glands at the time of the operation, and the rapid development of

the disease after the healing of the cicatrix, would seem to point to the idea that the original tumor was but a local nidus for a constitutional trouble, and that this having been destroyed, a general efflorescence of the disease ensued. A kindred idea is found in the popular belief that a manifestation of phthisis may follow the operation for the cure of anal fistula. The observations on the change of life in women would seem also to bear upon the same point.

Dr. Brubaker's Analysis of the Tumor.

—"Upon section the tumor is firm and hard, and presents a white, glistening surface, from which can be scraped a small quantity of fluid matter. Under the microscope the connective-tissue stroma is seen to be abundantly developed; in its meshes are developed epithelial cells, some of which have undergone degeneration. In some situations the cells are arranged in a linear manner, whilst in others they form groups or nests."

REMARKS ON THE CHICAGO BEEF WIRE SKEWER.

*Read before the Philadelphia County Medical Society,
September 12, 1883,*

BY W. R. D. BLACKWOOD, M.D.

THE supply of good, wholesome meat to a large city is a problem involving many points of great importance. Many cattle are slaughtered within a few hours after reaching the abattoirs; before the feverishness and excitement resulting from a long railroad-journey have abated, and the meat under the circumstances is not nearly so good or suitable for food as it would be even in healthy and prime animals, were it killed after a due time of rest. For a short time past beef slaughtered in Chicago and brought here in refrigerator cars has attracted the attention of those able to judge the article according to its merits, and for quality it is pronounced fully equal to any heretofore put on the market, and far ahead of the great bulk previously sold in the city, so far as a wholesome, sound, and moderate-priced beef is concerned. The animals are selected from approved droves, and well fed, watered, and housed for a definite and proper time before killing, and the product, therefore, is not only in its appearance perfect, but in the vital point of fitness for wholesome, nutritious, and palatable food it is unrivalled.

Some weeks ago a sensational attack was made on this variety of beef in the interest of a clique of butchers in this city, who, knowing the value of the Chicago article, were afraid of the effect on their business when it became better known to the public, and the silliest pretext, among others, advanced, was a supposed danger to consumers from the novel skewers employed to fasten the labels on the hind and fore-quarters, these being of barbed wire such as I exhibit to you to-night. It was predicted that an epidemic of harpooned tongues, tonsils, and pharynges would ensue from swallowing unawares by consumers the numerous wire skewers concealed in the meat, and I am informed that for a time a serious falling off in sales actually resulted from fear on this point. You will readily see that any one who would try to gulp down a morsel of meat large enough to hide this fastener must at the same time be in a famishing condition, have the appetite of a tiger, and need lessons in table etiquette, to put it mildly.

The labels which are attached—one to each quarter only—are removed by the butcher before cutting up the meat, and could not, even if allowed to remain, fail to attract attention of both cook and eater. Mr. Bradley, of the Great Western Market, is the largest dealer in this city of this excellent beef, and he has kindly supplied me with samples of the barbs. The claims which he makes for the particular beef under consideration are worthy of notice, as his experience in business for some years past is unequalled in this city, and the enormous quantity which he distributes to a large section of surrounding country fully justifies the high value he places upon it. I am glad to confirm what he says, from personal experience in my family. The meat is simply delicious, and excels anything we have previously had from the best butchers of the city.

TWO CASES OF COMPOUND AND COMMUNUTED FRACTURE OF THE SKULL.

BY C. W. DE LANNOY, M.D.,

Chester, Pennsylvania.

IN connection with the explosion of Jackson's pyrotechnic works in March of 1882, there occurred, among the many serious injuries inflicted by various projectiles, a series of fractures of the skull, of

which two furnish interesting data concerning the nature of these accidents and the results of treatment.

As an explosion was not anticipated, and the building was in the act of burning, the ordinary curiosity of a street crowd kept all faces directed towards the scene of action; in consequence of this, all wounds inflicted by missiles were situated upon the ventral or anterior surfaces of the body. Both fractures of the skull to which I here allude were situated above the eminences of the frontal bone, the ages of the patients, both males, being respectively nineteen and twenty-eight.

Case I. was first seen three days after the accident. Some good Samaritan had carefully closed the lips of a three-inch scalp-wound, extending obliquely across the left frontal region above the eminence. At the time when seen by myself and a colleague, who had the case in charge, the boy presented the appearance and conditions peculiar to one suffering from compression of the brain. Removing the stitches and thus releasing an abundant collection of coagulated blood and pus from beneath the scalp, fragments (*b*, Fig. 1) were taken away, all of which repre-

FIG. 1.



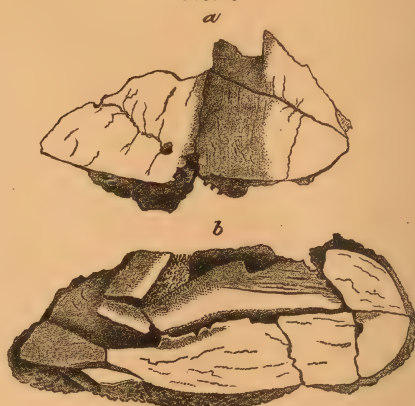
PORTIONS OF THREE TABLES, OS FRONTIS OF LEFT SIDE. *a*, internal table and portion of middle table; *b*, external table and portion of middle table.

sent what was lost of the external table, about one-half the thickness of the middle table clinging to their under surfaces. The

internal table (Fig. 1, *a*) was completely detached and turned over, so as to present its concave cerebral surface at the bottom of the wound. This plate was removed in three pieces, and the pulse of the patient rose from 30 to 60 almost instantly. With proper care as to local and constitutional treatment, the case steadily progressed to a favorable issue.

Case II. was that of a strong, wiry Irishman, who filled the office of fireman at the time of the explosion. On the third day after the accident, which was the time chosen for the operation, he was not suffering from a single symptom of either concussion or compression of the brain. Fragments of bone removed from his head (Fig. 2, *a* and *b*) were very

FIG. 2.



PORTIONS OF THREE TABLES, OS FRONTIS OF RIGHT SIDE. *a*, cerebral surface of internal table; *b*, fractured external and middle tables.

much comminuted and pushed down into the substance of the cerebrum, which we found considerably lacerated and softened; it may, in fact, be fairly stated that at least a teaspoonful of brain-matter came away with the many fragments of bone removed. Recovery was steady and progressive, with but few drawbacks, all due to imprudence of some kind on the part of the patient.

While I know but little concerning the details of these cases, yet from the adjoining histories and illustrations several interesting subjects for argument may be chosen.

In the first place, both fractures were compound and comminuted, and resulted from a concentrated blow, of which the force had been largely spent in producing the local lesion. In both, injury to the brain was limited to parts immediately beneath the seat of fracture; particularly was this true of No. 2, who from the beginning presented no symptoms of either concussion or compression. Case No. 1, through the ignorance of his first attendant, was, I

believe, reduced to the condition in which we found him, by the retention of intracranial blood-clots and discharges, and therefore incurred far greater risks of secondary intracranial inflammation than were to be anticipated for his fellow-sufferer.

Another important and noticeable feature is the difference in proportions as to the size of the pieces removed from the external and internal tables. In the case of No. 1 there was considerable shelving off of the internal table, while in No. 2 the external is relatively larger than the internal. Facts, fortunately, confirm theory in affording a reason for these differences. No. 2, who was acting as fireman close by the source of explosion, must have received the more powerful blow, one which, by its intense violence, might be said to have cut through the entire thickness of the calvarium without any lateral distribution of force, and the depth of injury sustained was greater and entirely out of proportion to its extent. On the other hand, No. 1 was standing at a distance, as a spectator only, and received the blow from a projectile which by the time it reached him had lost much of its original impetus. Now, all are familiar with the different results which attend the contact of projectiles with hard substances, when propelled from long or short distances. In the former case there is always more splintering, particularly at the point where the projectile obtains exit from the body it has come in contact with. In the latter case we meet with an aperture uniform in character throughout the entire thickness of the body struck by the missile.

It might prove of further interest to state that, although No. 2 lost a not inconsiderable amount of brain-cortex, both as the result of immediate injury and during the subsequent period of discharging, yet no mental or intellectual disturbance has been the result. For this I have my own evidence and that of his relatives. What bearing this fact may have upon the theory of the unilateral functions of the cerebrum I am not prepared to decide. It will be remembered, however, that experience has taught us that aphasia is at least in the large majority of cases associated with *right* hemiplegia, which, of course, means a hemorrhage affecting the *left* third frontal convolution,—aphasia rarely occurring when the hemorrhage is upon the opposite side of the brain. From a similar association

of the left cerebral hemisphere alone, with the function of intellection, injury of the right side (as in Case No. 2) would occasion no mental disturbance. The argument, however, is purely theoretical, and needs the support of an experience with brain-injuries which I have not the good fortune to possess.

Before leaving the discussion, I would refer to the use of plates as substitutes for the bone lost in comminuted fractures of the cranium. Judging from the results obtained in these cases, I regard them as totally unnecessary, and should deprecate the use of artificial means of protection in cases for which nature does so much to replace the bone lost by accident. The attempts at repair, in both of these injuries, have resulted in the formation of a tough fibro-cartilaginous plate, which appears to afford the necessary protection to the delicate organs beneath, and, beyond wearing an external pad of hard rubber or other appropriate material under circumstances that might be thought to render such additional protection desirable, it would seem unnecessary, to say the least, to attempt further interference with nature's *modus operandi*.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.

PHYSIOLOGY OF THE COCHLEA IN VERTEBRATES.

DR. B. BAGINSKY,* of Berlin, has recently laid before the Academy of Sciences of Berlin the results of a series of investigations on the cochlea of dogs. After alluding to the investigations in this direction by Helmholtz, Hensen, and J. Ranke, he deplores the fact that there have been no experimental researches which have resulted in any fixed conclusions regarding the cochlea of vertebrates, until the recent observations of H. Munk, who has shown that dogs in which the lower wall of the cochlea, near the round window, had been broken away, after remaining deaf for a period of fourteen days, again heard, though very imperfectly, and their perception of sound was limited to lower notes and noises. With this fact in view, Dr. Baginsky has performed a series of experiments on dogs, in the Veterinary School of Berlin, in order to find out

* June 14, 1883.

whether, and how far, the various parts of the cochlea, especially those portions on the *membrana basilaris*, are functionally dissimilar.

His plan of investigation has been, after opening the *bullæ ossea*, to destroy entirely one cochlea, so as to render the dog totally deaf on this side and thus exclude one ear from the observations. In the other cochlea various parts have been destroyed, either by piercing it or by chipping off portions of it.

After this treatment, the dogs have been tested for long periods as to their ability to hear notes on organ-pipes, arranged for the purpose with the greatest care, and ranging from C' to c'''' , the lowest and highest of which were open pipes. Finally, in the course of from three to ten weeks, when no further changes in the hearing could be detected, the animals were killed and the labyrinth removed. Then an uninterrupted series of sections were made, parallel to one another, in the direction from the base to the tip of the cochlea, and examined under the microscope.

The exclusion of one ear was very difficult, as either death resulted from the attempt to destroy the labyrinth, or phenomena of altered equilibrium were manifested, with partially-retained hearing.

But the slighter wounding on the opposite cochlea, when not productive of death or oscillations of the head, often produced, by the resultant inflammation, permanent deafness. However, even with this good result, many of the dogs, by reason of their inattention, etc., did not furnish reliable results in testing their hearing. In a large number of experiments, only a few proved of any value in the microscopic examinations. It was especially desirable to show finally, by the microscope, that pathological changes in one of the cochleæ had occurred throughout the organ, while in the other they had occurred only in the wounded portion. In the latter connection it was of great value to see that, with the finer changes in the fibres of the auditory nerve, grosser changes were also detected in the cells of the *ganglion spirale* and of the *intumescencia gangliiformis Scarpæ*.

Dogs made completely deaf in one ear, and partially so in the other ear, by boring into the point of the cochlea, were, in the course of a few days, aroused only by the report of a pistol; towards the end of the first week they reacted distinctly to the

note c'''' , and in some cases to the note c''' . In the course of the second week the dogs heard c'''' and c''' ; only rarely as low as c'' . Reactions to sounds thus established became soon distincter, but did not descend the scale. As long thereafter as the animals lived, they did not hear notes as low as c''' or c'' .

Anatomical investigation of the cochlea the point of which had been broken showed that the upper turn and the greater part of the middle turn were filled with fibrous cicatricial tissue, with destruction of the normal contents: the lower remnant of the whorls of the cochlea and the rest of the labyrinth were entirely normal. Upon the other side—i.e., where the hearing was destroyed—the cochlea was either entirely or nearly filled with cicatricial tissue. In the latter case, if the original soft parts were at all recognizable, it was seen that all or very nearly all the nerve-fibres and ganglion-cells were degenerated.

Dogs in which one ear had been made entirely deaf and which had been injured in the other ear by breaking off a small portion of the promontory at the base of the cochlea, manifested often temporary deafness in the latter ear. Very often it was found in these cases that not the entire cochlea but only the lowest turn was filled with cicatricial tissue, either in both *scalæ* or in the entire *scala vestibuli* and in part of the *scala tympani*, and also that the *membrana basilaris* was at these points destroyed. Sometimes in these instances fibrous constrictions in the trunk of the acoustic nerve were detected.

In more successful cases, in the course of a few days the dogs would move upon the discharge of a pistol, and later they would hear musical notes, first only slightly, then gradually more decidedly.

In a certain number of dogs, in respect to the beginning and the extent of the reaction, no difference was detected between high and low notes. A second set of dogs, in fact, a large class, began to react at once, both to high and low notes, but the reactions to low notes were at first distinctly stronger than those to high notes. Finally, in a third and smaller class the reactions were at first and for a longer time only in connection with low notes, the three or four lowest octaves; and at last, in the course of one or two weeks, reactions occurred in connection with higher notes. In conclusion, all these dogs appeared to

hear these high and low notes in a normal way.

In the ear which had been made entirely deaf, the cochlea was found altered in a way similar to that already described for injured parts of the opposite cochlea. In the latter ear, the small defect in the base of the cochlea, where the bone had been cut away, had been closed by a membrane, and in a small portion of the lowest whorl of the cochlea, which is nearest the round window, the entire *scala tympani*, or a part of it, and now and then a part of the *scala vestibuli*, were filled with fibrous tissue. In such cases, the *lamina spiralis membranacea* was often embedded in the fibrous tissue and destroyed. Otherwise, all other parts were normal, excepting that, at most, sometimes here and there in the cochlea a few nerve-fibres and ganglion-cells were apparently degenerated.

The beginning deafness in the less affected ear, the return of hearing, and the manner of its increase in all the experiments are explained by the loss of the fluid contents of the cochlea, and by the inflammation extending from the point of irritation throughout the membranous parts of the cochlea. The return of hearing is accounted for by the fact that after a slight laceration the wound closes, and the inflammation undergoes retrograde metamorphosis to a certain extent.

It was not supposable that after healing had occurred abnormal tensions temporarily existed in the basilar membrane, and the post-mortem examinations gave no support to the view that local contractions of this same membrane existed. It is claimed by Baginsky that the above experiments show that *the point or cupola of the cochlea contains the parts of the nerve concerned in the perception of low notes, while the base of the cochlea, near the round window and the promontory, contains the portions of the nerve concerned in hearing high notes.*

Upon this supposition many points in relation to *sound-conduction*, as well as *sound-perception*, may be made clearer, and your reporter draws the following practical deductions:

It must be borne in mind, first, that the sounds most important for the human ear to hear are those of the human voice, and, second, that these sounds are among the high rather than among the low notes in the musical scale. We also learn by the researches of the experimental physiologist

that the parts of the internal ear which are best adapted to the perception of high notes are probably not only in the cochlea, but in that part of it nearest the promontory and the round window,—*i.e.*, nearest the tympanic cavity,—since these two parts of the cochlea abut upon the tympanic cavity. It is seen, then, by this anatomical arrangement and topographical distribution of the terminal nerves in the cochlea already described that those parts of the auditory nerve most important to have easily thrown into vibration, and, in fact, those most likely to be called into action by the sounds of the human voice, are placed where sound-waves would be most likely to reach them directly. For it is a physical fact that when sound falls on the *membrana tympani* some of it passes directly through the membrane, and across the tympanic cavity, and strikes upon the membrane of the round window and upon the promontory. Sound taking such a course would thus act almost directly upon the terminal nerve-fibres in the cochlea, underlying these two points, without pursuing the more roundabout way through the oscillations of the chain of auditory ossicles. By pursuing the latter course a sound-wave would impress the nerve-fibres in the cupola of the cochlea, which seem adapted to the perception of low notes, before it reached the round window. After passing the cupola, at the end of the vestibular canal, it would enter the tympanic canal of the cochlea, but would not impinge upon the nerves concerned in the perception of high notes (the important ones in our present consideration) until it reached the round window at the end of the tympanic canal of the cochlea. Hence it seems probable that high notes can be and are very largely heard directly, without being obliged to traverse the longer course through the oscillating chain of bones.

Another proof that the nerves lying near the promontory and round window are concerned in the perception of high notes is given by the experiments of C. J. Blake* with König's rods. It was here shown that when the *membrana tympani* was perforated, and the high note of a König rod thus more readily permitted to fall directly on the promontory and round window, not only very high notes could be heard, but considerably higher than when the mem-

* Transactions American Otological Society, 1872.

brana tympani was imperforate. It also showed that the important ability to hear high notes was retained, notwithstanding the loss of integrity in the drum-membrane.

If, however, the passage of sound-waves to the tympanic cavity, or to the membrane of the round window and promontory, is impeded, as in disease, then, of course, the nerve-filaments in the cochlea near these points cannot be reached easily.

Thus, in coryza, the first impairment of hearing is in connection with the higher and delicate tones of the human voice; because in such instances the nerve-fibres lying nearest the promontory and round window cannot be reached by sound-waves, on account of the swelling of the tympanic mucous membrane near these parts.

THE SIGNIFICANCE OF THE TRANSMISSION OF SOUND TO THE EAR THROUGH THE TISSUES IN AURAL DISEASE.

Dr. Samuel Sexton, of New York City, in a paper on the above topic, read before the American Otological Society at the annual meeting, July 17, 1883, draws the following conclusions:

1. When the vibrating tuning-fork, placed on the teeth or vertex, is better heard through the tissues on one side, it simply indicates that the better ear excludes wholly or in part such (tissue) transmission; but it does not prove that the auditory nerve in either is affected. (Of course, if the nerve of audition be gravely affected, sound will not be heard by any method of conduction.)

2. If the conductive mechanism is absent or greatly damaged in one ear, while the other remains more or less normal, aerial transmission will be found to be ineffectual in the diseased ear, while the tuning-fork, allowed to vibrate as before, will therefore be best heard in the diseased ear, while its vibrations will be almost entirely excluded from the healthy ear.

3. In labyrinthine disease pure and simple, the middle ear being normal, the tuning-fork would be best heard by aerial conduction; because bone conduction would be excluded. (In those extreme cases where destructive disease of the nerve has taken place, impulses of sound may be appreciated irrespective of either the transmitting or labyrinthine structures: thus, the deaf-mute is conscious of the sound of thunder, artillery, drums, stamping of feet on the floor, and the like.)

4. If the above deductions be true, we

may conclude that the tuning-fork is of but little if any value in the differentiation of aural disease; and the same applies to König's rods.

In this connection your reporter would submit the following original reflections upon the diagnostic value of the tuning-fork, and upon the erroneous deductions made by its use regarding the nature of aural disease, especially in reference to so-called cochlear inflammation, supposed disease of the auditory nerve, and altered perception of sound in syphilitic disease of the ear.

The phenomena observed when a vibrating tuning-fork is placed upon the vertex, glabella, or teeth, either in an individual with or without normal ear or ears, have certainly been misunderstood. This has led to a misapplication of them in diagnosis, and to very false conclusions.

The chief error lies in considering the results obtained by its use as data for estimating the *perceptive* power of the nerves, rather than the *conducting* power of the auditory apparatus in the external and middle ear.

Hence phenomena in the manner of hearing the tuning-fork through the tissues have been attributed to alterations in the nerves, as in so-called "cochlitis," instead of to changes in the mucous membrane of the drum-cavity and in that covering the ossicula. The slightest changes in conducting power, which ensue upon the least change in the mucous membrane of the drum-cavity and its contents, or in the auditory canal, instantly alter greatly the way in which the tuning-fork is heard; whereas changes analogous in kind or extent, in the auditory nerve, would render it inactive as a percipient organ.

Thus the diagnostician in his eagerness has jumped over, so to speak, the nearer and plainer explanation of phenomena in the hearing of the tuning-fork, offered him in the changes in the drum-cavity or its contents, and has sought for an explanation of the morbid phenomena of audition in the more remote and less understood internal ear.

Thus it has come about that an endeavor has been made to establish the existence of a "syphilitic cochlitis,"* the so-called acoustic phenomena in which may be accounted for much more easily by the sup-

* Roosa, First Congress International Otol. Society, 1876.

position of altered conduction by reason of changes in the mucous membrane, so well known to occur in syphilis, than by the difficult and entirely untenable view that the changes in audition are due to alteration in the nerve and hence are phenomena of altered perception. This endeavor to remove the diagnosis from the nearer and more probable ground to a remoter and less known one has been not only unnecessary, but misleading; unnecessary, because the experiments of Helmholtz, Politzer, Buck, Hensen, C. H. Burnett, and McKendrick upon the mechanism of the ossicles and their relation to audition have been demonstrable *ad oculos*, and have made clear the phenomena of conduction of sound and how it may be interfered with; whereas we know positively nothing about the mechanism of perception of sound in the labyrinth.

Hence the endeavor to refer phenomena most probably occurring in the tympanic cavity and attributable to altered conduction, to a part of the ear unknown, excepting that it is concerned in all probability with perception, is unscientific, and misleading to younger minds.

The fact that sudden deafness in a syphilitic patient has been cured by an anti-syphilitic remedy is by no means a proof that the disease lay in the cochlea and was due to a "cochlitis." It would be just as much a proof, perhaps more, that the disease lay in the mucous membrane of the drum-cavity or of its contents, and, by interfering with sound-conduction, had caused deafness, and that the latter had been removed by the anti-syphilitic action of the drug upon the mucous membrane. Furthermore, if by "cochlitis" an inflammation in nerve-tissue is implied, it is by no means clear, on any ground, that an easy removal of the inflammation could be effected by any remedy, or, if the disease were removed, that the hearing would return either so quickly or so completely as in the cases of so-called "cochlitis" recorded by the writer alluded to.

REMARKABLE LONGEVITY OF A PHYSICIAN.—The death is announced of Dr. Jachimowicz, of Jarosinka, in the government of Kiew, Russia, at the ripe age of one hundred and six. It is said of him that he was able to superintend his extensive and successful practice till near the end of his life.—*Medical Press*.

TRANSLATIONS.

INFLAMMATORY FUNGOID NEOPLASM OF THE SKIN.—Dr. R. Naether reports the following remarkable case from Prof. Wagner's clinic in Leipsic. The patient was a man, aged 40 years, without any hereditary predisposition or syphilitic history. In July, 1881, after being exposed to the wet, he suffered from gastric disturbance, lasting only for a few days, but in the end of August of the same year an eruption broke out on his entire body, with the exception of the face, in red, burning, itching, and elevated spots, about the size of a dollar, which a month later extended to the face. This condition remained about stationary until September, 1882, when the spots increased greatly in size and secreted a rapidly-decomposing fluid. The growths then increased to such an extent as entirely to destroy sight and all resemblance of the face to that of a human being, the only place where the skin appeared at all normal being at the tip of the nose. A few growths were also found scattered over the body. Death occurred from prostration on November 28. This disease is regarded by Dr. Naether as *granuloma sarcomatodes cutaneum*.—*Deutsches Archiv für Klin. Med.*, July 31, 1883.

GANGRENE OF THE PENIS AS A CONSEQUENCE OF ACUTE GONORRHOEA.—Jeszczynski reports the case of a robust countryman, 23 years of age, who was seen by him seven days after infection: the discharge and swelling of the penis had then lasted four days. The glans was completely covered by the swollen prepuce; there was a profuse greenish discharge and sharp pain at the root of the penis, which was greatly swollen and of a greenish-brown color. Incisions were made in both sides of the penis, extending along its entire length, and a large quantity of fetid pus evacuated. On the next day several vesicles had formed on the external skin surface, and a circular line of demarcation was commencing to form at the inner end of the incisions, and three days later the entire gangrenous skin separated; no fever was present. Healing took place by granulation under iodoform dressings, and was complete in about five weeks, leaving two broad scars on the upper surface of the organ.—*Centralblatt für Chirurgie*, August 4, 1883.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 6, 1883.

EDITORIAL.

ANNOUNCEMENT.

WITH the last number, and the close of the thirteenth volume, Prof. H. C. Wood resigned the duties and responsibilities of the position of chief editor of the *TIMES*,—duties which he had so long and so ably discharged, and responsibilities with which he had become identified. On account of increasing engagements, Dr. Wood has been reluctantly compelled to take this step, which he had contemplated for some months, and which he felt that he might safely do now that the prosperity of the *TIMES* (and, in truth, mainly through his able and vigorous management) appears firmly established. As will be noticed in the present number, he will still continue his welcome contributions to its pages.

This being the first issue of the volume, we have commenced a series of reports upon progress in the several departments of medicine, which will henceforth appear regularly throughout the year, arrangements having been made for these articles with gentlemen possessing special qualifications for the duties which they have undertaken. It is believed that this new departure will be found acceptable to our readers. The subjects and reporters are as follows:

On Nervous Diseases, also Therapeutics and Materia Medica, HORATIO C. WOOD, M.D., Professor of Materia Medica, Pharmacy, and General Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania, etc.
On Obstetrics and Gynæcology, THEOPHILUS PARVIN, M.D., LL.D., Professor of Obstetrics and Gynæcology in the Jefferson Medical College of Philadelphia, etc.
On Anatomy and Surgery, J. EWING MEARS, M.D., Professor of Anatomy and Surgery

in the Pennsylvania College of Dental Surgery; Demonstrator of Surgery in the Jefferson Medical College, etc.

On Syphilis and Genito-Urinary Diseases, J. WILLIAM WHITE, M.D., Lecturer on Operative and Genito-Urinary Surgery, with Venereal Diseases, in the University of Pennsylvania, etc.

On General Pathology and Clinical Medicine, JAMES C. WILSON, M.D., Physician to the Philadelphia Hospital and to the Hospital of the Jefferson Medical College, etc.

On Diseases of the Throat and Nose, CARL SEILER, M.D., Lecturer on Laryngology in the University of Pennsylvania, etc.

On Medical Applications of Electricity, W. R. D. BLACKWOOD, M.D., Physician to St. Mary's Hospital; Consultant on Nervous Diseases, and Electrician to the Presbyterian Hospital, Philadelphia, etc.

On Diseases of the Skin, ARTHUR VAN HARTLINGEN, M.D., Professor of Diseases of the Skin in the Philadelphia Polyclinic, etc.

On Diseases of the Ear, CHARLES H. BURNETT, M.D., Professor of Diseases of the Ear in the Philadelphia Polyclinic; Aural Surgeon to the Presbyterian Hospital, etc.

On Diseases of the Eye, ALBERT G. HEYL, M.D., Ophthalmic Surgeon to the Episcopal Hospital, etc.

On Morbid Anatomy and Pathology, MORRIS LONGSTRETH, M.D., Lecturer on Pathological Anatomy in the Jefferson Medical College; Pathologist and Curator to the Pennsylvania Hospital, etc.

On Physiology, ROBERT MEADE SMITH, M.D., Demonstrator of Physiology at the University of Pennsylvania, etc.

On Medical Chemistry, WM. H. GREENE, M.D., Professor of Chemistry in the Philadelphia High School; formerly Demonstrator of Chemistry at the University of Pennsylvania, etc.

On Hygiene, Toxicology, and Medical Jurisprudence, HENRY LEFFMANN, M.D., Professor of Clinical Chemistry and Hygiene in the Philadelphia Polyclinic.

With this exception, the *TIMES*, under its present management, will continue the features that our readers are familiar with,—pursuing the same outspoken and independent course which has characterized it in the past, upon subjects of general pro-

professional interest. True to the principles expressed in the Code of Ethics of the American Medical Association, and a consistent advocate of scientific rationalism in medicine, it will continue to advocate higher medical education, and to lend its voice and influence to every measure calculated to raise the standard of medical practice.

"CROWNER'S 'QUEST LAW."

IN the discussion of the qualifications of a candidate for coroner, we think that it must be conceded that the examination of a corpse in order to determine the mode of death can properly be performed only by a person fitted by training and experience for the work; in other words, he must be a physician. Any one not possessing such training and experience is disqualified from forming a sound and reliable judgment upon the evidence presented. The medical examiner system of Massachusetts has demonstrated the fact that the requirements of both science and law are better satisfied by having the duties formerly performed by a coroner intrusted to a purely medical commission, since questions constantly arise, both at the inquest and in court, which can only be answered by physicians. The only excuse for the continuance of that mediæval functionary, the coroner, therefore, will be that he himself is a physician. The profession in this city made a special effort some years ago to have this truth acknowledged by our masters the politicians, and for several successive elections it has been accepted as the principle in making nominations. One of the contending parties has recently seen fit to break this rule and to nominate a candidate who is not a physician; the other very wisely nominated a gentleman of high professional standing who possesses all the qualifications required for the office. Those physicians of Philadelphia who are in favor of supporting principle rather than party will have an oppor-

tunity afforded them this fall of re-asserting the principle they have declared, that the coroner must be a medical man. It is not very complimentary to the profession to be told that the political coroner can spare out of his fees enough money to pay two physicians to work under him. It would be much better, if there is income enough to share among three, that the third also should be a medical man, and thus have medical examiners entirely independent of any simply political influence. The coroner has relations with the medical profession, and claims that he has power to reprimand physicians and fine or commit them for contempt (for under such circumstances their true feelings sometimes may be inadvertently expressed, even though it would be better policy to conceal them): on account, therefore, also of these professional relations, should this functionary (if not really *functus officio*) be not merely a physician, but also one whose standing and attainments will command the respect and support of the profession.

CLINICAL INSTRUCTION AT THE PENNSYLVANIA HOSPITAL.

REFERENCE to the early history of the Pennsylvania Hospital shows that when the project of starting the hospital was first broached in this city the fatal objection was made that means were wanting to pay the physicians for their attendance upon the patients, thus recognizing, at that date, the principle of equity that no one has the right to enjoy the labor and time of another without rendering to him an equivalent in return. When informed of this difficulty, certain physicians, out of pure charity, volunteered their services to attend the poor in the wards who were unable to pay. Subsequently the physicians agreed also to contribute their fees received from students in attendance upon the practice of the house, towards forming a library. The library grew, and the fees

increased even more rapidly, so that a surplus of some fifteen thousand dollars had gradually accumulated a few years since; which, however, was not returned to the lawful owners, the medical staff, as it should have been, but was "loaned" to the hospital-funds. At a recent meeting of the managers of the hospital a resolution was adopted, the object of which is to create a revenue to the hospital by requiring physicians to give clinical lectures, and by charging students five dollars each for admission to them. This will have the effect of reducing the size of the classes to such a point that it would be absurd and inconsistent with self-respect for such eminent practitioners to waste time in lecturing before them. We hope that the managers will rescind this act, as it practically closes the doors of this old and venerated institution to clinical teaching, and reduces the gentlemen of the medical staff, in the eyes of the public, to a menial position, if not to practical slavery.

LEADING ARTICLES.

THE SOUTHWEST AS A HEALTH-RESORT.

EACH year, as the winter threatens, in the Northern United States an exodus begins of those who are already stricken with or who fear consumption, and flows steadily towards Florida. That State certainly offers to the invalid great natural beauty, balmy airs, and moderately good hotels; but its distressing crowding, its abundant malaria, and its moist air, favoring, in many cases, pulmonic softening, are very serious obstacles to recovery of health.

As is well known, there runs almost through the United States, from San Antonio, Texas, northward, a wide strip of country whose air is extraordinarily dry. Less convenient of access, mostly unsupplied with hotels and the resources of civilization, this region has nevertheless begun to endanger the supremacy of Florida as a winter health-resort for consumptives.

To our thinking, for most cases of phthisis its superiority over Florida is unquestionable. The intense dryness of the air

renders the latter more stimulating to the general system. Dry heat is borne much more easily than moist heat, dry cold than moist cold, and at a moderate temperature the dryness seems to brace up nerve and muscle. Further, experience shows that pulmonic breaking-down occurs much more slowly under the desiccating influence of a Texan desert than under that of a soft sea-air.

The great natural beauties of Colorado, and the circumstance that railroads first went into this part of the dry belt, have led to its development as a sanitarium. The height of these health-resorts above the sea tends, however, to the production of hemorrhage, by necessitating more work on the part of the lungs, whilst the intense winter cold enforces during many months a chiefly in-door life.

Without occupying more space and time with discussion, enough has been said to show why the climate and circumstances of the southern portions of this dry belt should be carefully studied by physicians, and why there is a rapidly-increasing pilgrimage each winter to Texas.

In Texas itself the opinion among both the laity and the profession is wide-spread that the consumptive should spend the whole year, and not a part of it, in the State if he hopes for arrest of his disease. This opinion seems well founded. Mere warmth of climate is chiefly valuable to the consumptive because it allows free out-door existence and lessens the tendency to catarrhal attacks. Great dryness of air seems to have a more direct curative influence, and really to arrest or prevent pulmonic softening; and when warmth and dryness are associated the conditions are most favorable.

The difference between the air of the far Southwest and that of the East is at least as great in summer as in winter. The United States Army Regulations require that a horse shall be given five gallons of water; but in Texas during the summer twenty gallons are required, even though no work be done. A man when marching will drink two to four gallons of water in the twenty-four hours. I have myself drunk one-half gallon in twenty minutes after a seven hours' march without water. A very noticeable thing under these circumstances is that, though such enormous draughts of water are taken, scarcely any urine is passed,—certainly not one-half of

the amount ordinarily voided in the same period at home. The escape of water by insensible perspiration is enormous; and it is a question well worth practical study as to the possibility of curing early Bright's disease by thus bringing to a minimum the work required of the kidneys.

The consumptive who hopes to find life in this dry region ought to seek it all the year round.

In regard to the winter climate of Texas we do not mean to say much. It is an axiom that out-door life is the life for the man with weak lungs; and a guide and tent are here, as in Florida, worth more than medicine and fine hotels in the beginning of the disease. If the patient have ample means, an ambulance, a pair of mules, a guide, and a Sibley tent make life in the winter months of Texas not only possible but pleasurable, and, if the traveller be anything of a sportsman, enjoyment and a very important addition to the *menu* may be had, provided care is taken to go into a game region. A large part of the State is no better than a desert, with little or nothing in it; but, what with four species of quail and numerous waterfowl in the more cultivated parts, antelope, deer, and turkeys, and the Mexican and Messina quail, in the wilder regions, it is easy to arrange a trip so as during the winter months to find game continually in abundance.

An advantage of this mode of life in Texas is, that, if meats be supplied by the gun, by means of California canned goods a very excellent table can be spread at a comparatively moderate cost. During a recent outing, buying of the United States commissariat, our mess-bills for a party of four were ten dollars a week apiece. In this bill were included whiskey, which some of the party declined, and for all an abundance of California claret (a good, honest wine, which may be purchased in San Antonio for one dollar a gallon), and also the monthly wages (thirty-six dollars and food) of a cook.

The tent must be provided with a stove; otherwise the sudden northers of Texas would be unendurable. The temperature at any time of a day may be that of a Northern June, when across the prairie appears a sharply-defined dark cloud, with a column under it, marching steadily and rapidly forward. The column is a raging mass of wind and hail and snow, and pro-

tection from it is absolutely necessary. An immediate halt and preparation of the tent, or a seeking of its cover if camp be already pitched, can alone save the travelling invalid from destruction.

Everywhere in the far Southwest the food question for the invalid is most important,—indeed, dominant. Outside of one or two places, decent food is very rarely if ever found in Western Texas; and it is this difficulty which constitutes the most insuperable obstacle to the consumptive tourist, and almost necessitates the taking of supplies. In my experience, these supplies can be purchased more cheaply at San Antonio than in our Eastern cities, so that it is useless to load one's self down at home.

In regard to the cost of camping in this region, the expense of feeding has already been intimated. The only other expense is that of the outfit, which can rarely be hired, but must be purchased. The cost of an ambulance, two horses, and harness in San Antonio is about four hundred dollars; but to any one who can stand horse-back-riding—and for others the trip must be of doubtful utility—it is much cheaper and at the same time much better to buy ponies, which can be bought at from forty to seventy-five dollars each. At least two are necessary, one for riding and one for carrying. A pack-mule costs a little more than a pony, but is preferable for packing. Whilst one pony will scarcely follow another at all unless continually watched, and a mule pays comparatively little attention to another mule, the respect of the long-eared animal for his more highly-organized colleague is such that he can scarcely be driven away from him. If the travel be leisurely, the Texan pony or pony-mule will keep in good condition by simple grazing. The small Texan mule, which is a cross between the ass and the pony, is as much more hardy and enduring than the large mule as the pony is than the horse. The largest men in Texas seem to select the smallest ponies: so no man need be deterred by his size from bestriding a pony. I have seen four persons—man, wife, and two children—carried cheerily along on the back of a little "burro," *i.e.*, donkey, scarcely bigger than a large Newfoundland dog.

The wet season of Texas may be a serious blot in its yearly climate from the consumptive's point of view. It is usually

considered to be during the months of July, August, and September; but in San Antonio and its neighborhood the early winter months are sometimes quite wet. The fact is that San Antonio is really the extreme southern limit of the arid region, and that in order to get the full benefit of the dry treatment at least much of the year should be passed north or west of that city. The hotel accommodations of San Antonio, however, are bad enough, but beyond it there is probably not, at present, a decent hotel in all Texas. At El Paso a new hotel has been erected, a fine, large structure, which is to be opened this autumn under the management, so we are credibly informed, of one of the leading officers of the Southern Pacific Railroad. If this be true, it will probably be well kept. El Paso is in the very heart of the arid region, is on the borders of Mexico, is a terminal point of the Central Mexican Railroad, and an extremely active place. Unless it be in second-class theatres and in the presence of a garrison band, we know of no superior attractions possessed over it by San Antonio; and if the new hotel be well kept and supplied with good water,—the water of El Paso being, in general, execrable,—it will afford a most excellent place for spending the early winter months. The Central Mexican Railroad is now open for travel to Chihuahua, and is being completed at the rate of three miles a day. It is expected to reach the city of Mexico in a year, and then the health-seeking invalid, by means of the Denver and Rio Grande, the Atchison, Topeka, and Santa Fé, and the Central Mexican Railroads, can travel at will, almost through the length of the dry belt, and, if he choose, enjoy always a temperate climate.

As we have found the summer temperature at San Antonio, Texas, it is very warm but quite bearable. The middle of the day is excessively hot outside of the houses, but almost all the time there is a strong breeze, which makes the temperature quite endurable in a well-shaded room. The rains seem to be usually in the form of tremendous downpours, lasting only a few hours, and the hot sun soon dries the ground, so that the most delicate invalid can walk about freely. With proper suburban accommodations, if such could be found, the consumptive might get through a summer in San Antonio very well, provided he was content to stay in the house

during the hours of sun and find amusement in himself and his books.

Texas offers no attractive mountain-resort. The only place which is high enough to very distinctly affect the temperature is the country about Fort Davis. The sunshine here is intensely hot from 11 A.M. to 5 P.M., but even at these times in the houses the air is cool enough to be pleasant. The nights are mostly cold, requiring blankets, while the early mornings and evenings are delicious. The wet season at this place is very decided, but manifests itself in heavy showers rather than continuous rain. There is some very fine scenery in the neighborhood of the fort: indeed, the fort and town are beautifully situated, and the invalid might very well visit the place were it not for the fact that there are simply no accommodations whatever that a person accustomed at home to anything better than a laborer's cottage, could endure.

El Paso is higher than San Antonio, but my experience does not make it cooler. The whole Texan Rio Grande region is a terror in its heat. The United States post of Presidio, which is several hundred miles below El Paso, has recently been abandoned, chiefly on account of its temperature. As I was informed by the late commanding officer, the thermometer, as early as June, was frequently 110° F. at midnight in an adobe house, the coolest of structures.

From El Paso twenty hours of railroad-riding will take the invalid to Santa Fé, which is in its climate probably the most attractive spot in the whole arid belt. Its moderate elevation, whilst not sufficient usually to affect the consumptive seriously, is enough to give immunity from excessive heat. It affords, therefore, a delightful refuge to any one who finds the Texan summer too severe. It is true that the hot months are its wet season, but during my stay the mornings would be bright and clear, the mid-days swept by violent rain-storms, and the late afternoon beautifully brilliant in sunshine, with perhaps drifting cloud-masses. According to the resident army surgeon, such days were typical of the summer climate of the region. Then there is a large, well-kept hotel, affording a fairly good table, much better than I ever saw anywhere in Texas. A little farther north, on the Atchison and Topeka Railroad, are the hot springs of Las Vegas, which are said to be very well pro-

vided with hotel accommodations, although of this I cannot speak from personal observation. H. C. WOOD.

NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

MELANO-SARCOMA.—Not long since, Dr. W. H. Falls, of this city, reported a case of melanosis in which the patient had turned absolutely black before dying. The disease being so rare, it was with some interest that, during a recent visit to the city hospital, I learned from Dr. Thomson, the resident physician in charge, of a similar case in the medical wards. The patient is a male, *æt.* 57, carpenter. Previous health good. He had a pedunculated tumor, springing from the integument over the upper lumbar vertebræ, removed by abscission over a year ago. The wound healed kindly, but in a few months in the cicatrix a dark tumor made its appearance, soon followed by others in the subcutaneous areolar tissue of different parts of the body. These small diffuse tumors are from the size of a pea to that of an almond, and as they grow older form an attachment to the overlying integument. They are dark in color, and are pretty well distributed over the whole of the surface of the body, numbering five hundred and sixty-one in all, two hundred and thirty-two being attached to the skin. The patient's general health is fair, and he is under the expectant treatment. He is watched with considerable curiosity by all the pathologists of the city.

The cooler weather of September has brought home most of our citizens who have been sojourning at watering-places, and with them, of course, the family doctor. They might as well have remained in the city, for, according to a paper read before the Academy of Medicine by Dr. Cleveland, a gentleman whose facilities for knowing whereof he speaks are excellent, this summer has been unusually healthy for the young folk, the ordinary summer children's diseases being both scarce and mild.

Students are rushing into the medical colleges with more than usual avidity for the time of year. Professor Seely, dean of the Medical College of Ohio, tells me that the number of matriculates is larger than ever before in the history of the colleges this long before the season opens.

At a fire in the central part of the city nine lives were lost because of the poor means of egress from the upper floors of the building. This, of course, has raised the customary cry for fire-escapes in all of our manufactories where any number of people are engaged above the ground-floor. But few of the fac-

tories are adequately provided with fire-escapes, as every large fire we have abundantly testifies.

PRESCRIBING DRUGGISTS.—This subject has at length grown to be such a nuisance that even our dignified Academy of Medicine has seen fit to take some steps in regard to it. A committee of three—Drs. Ransohoff, Cleveland, and Thrasher—was appointed to see what would best be done. Some of the members were in favor of taking a list of those druggists known to be guilty of unprofessional conduct, and of boycotting them. Others were of the opinion that, unless a radical change in the action of our pharmacists should take place, physicians would be driven to dispensing their own drugs. This, it was said, would also prove an effectual preventive against the repetition of prescriptions without the physician's advice. Speaking of the repetition of prescriptions, Dr. Culbertson said that he knew of one of his prescriptions that had been refilled without his order for the patient and all of the friends more than *two hundred* times. He was paid for but one prescription.

A. B. T.

September 14, 1883.

CORRESPONDENCE.

LONDON LETTER.

THERE is a dearth of medical news at present, and everybody, or nearly every leading medical man, is out of town,—a number being at the International Medical Congress, sitting at Amsterdam. The Medical Act Amendment Bill failed to complete its act of parturition, and remains not "still-born," but "unborn." The vigorous action of the threatened corporations, and notably the Scotch bodies, impeded its progress, and, though it had stanch well-wishers in the Cabinet, including the Premier himself, it foundered amidst the breakers of parliamentary factions and the disorder which the Irish Nationalist members created up to the last. We were told that if this bill did not pass there would be no more attempts at medical reform made this century: so there is little prospect of the matter being discussed again in these columns,—at least during the time the present writer is the London correspondent. Such being the case, something may be said as to the attitude assumed by him in his letters. They have created a good deal of comment, both in the United States army journals, and even at home, and the views expressed by him have not always been palatable to his critics. It was never hoped that they would be. There is much left undone that is desirable, though, also, a good deal of what is good has been done. The line taken has been that, due to causes partly outside the

profession, partly within itself, the position of the medical profession is not what it should be, considering its numbers and their individual attainments. For such readers as may hold that the writer lacks patriotism, on the plea "that it is an ill bird that fouls its own nest," it may be well to retort, "Respect begins at home." And the profession must undergo some radical transformation within itself before it will gain the position which, after all, belongs to it. A recent pamphlet has appeared, entitled "The Political Powerlessness of the Medical Profession: its Causes and its Remedies," by Balthazar Foster, the eminent Birmingham physician, which, to my mind, is full of instruction. He points out therein how the Medical Bill of 1858 was the outcome of agitation dating back to that great reform time, 1831. It took the form of a bill drafted by Mr. Wakley (of *The Lancet*) in 1840. When passed, "we won neither of the essentials demanded by the Association: neither a single mode of entering the profession, nor direct representation in the Medical Council." The plea against direct representation was the lack of a register, yet "for a quarter of a century the register has been complete, the medical practitioners of the United Kingdom have contributed from their narrow means one hundred and fifty thousand pounds for the support of a council to represent and defend the interests of the colleges in opposition to the wishes of the profession, and, as a result of our taxation, to leave us the worst-governed medical body in Europe." There is no uncertain sound about statements like these. Such was the sense of failure in the working of the council that the medical-reform committee soon had to recommence its labors. But, though strong representations were made, the council were quite indifferent to them. The medical bills were brought forward, whose fate was failure, until with some prospects the recent proposed bill was accepted. How? "Worn by the long weariness of waiting, broken by repeated disappointment and defeat, we accept this bill as the best we are likely to obtain. But surely such small results after such long labors must convince us of the political impotence of the profession to which we belong." So says Dr. Foster. He then points out what strides physiology had made since 1858, and what was being done when the anti-vivisection agitation checked the progress of experimental inquiry in Great Britain and Ireland. On this the profession was united, and Lord Sherbrooke (then Mr. Robert Lowe), as quoted by Dr. Foster, wrote, "I do not agree with you that, as matters stand now, you ought to submit to any legislation. The law is this: any person may inflict any pain short of torture on any domestic animal, and any torture he pleases on any non-domesticated animal. So long as the law stands, it is a gross insult to the medical profession to single them out as the only excep-

tion to these general rules, and I would advise them not to submit to it. People are very often taken at their own valuation, and I would never admit that you are the only persons with whose liberty it is necessary to interfere." Dr. Foster points out "that if our courage had not been broken by long years of political powerlessness, we should have followed this wise counsel and have obtained better terms." Yet the clamor is still going on for a still more stringent act. Dr. Foster goes on, "It is no wonder to me that a distinguished member of the Upper House, who once fought for us in the Commons, should have said that in all political action we doctors are such poor creatures as to be hardly worth fighting for." The recent action about the arrest of the working of "the Contagious Diseases Act (human) is another slap in the face administered to our profession by the powers that be." Yet our leaders are able men; but, as he says, "our leaders act and speak only as individuals or as the representatives of small bodies of the profession; there is no power of numbers behind them." They do not represent the huge bulk of the profession at large. They represent small parties,—colleges ruled by oligarchies. Then he points out that even the British Medical Association had not direct representation, "and has been met over and over again with the taunt of not applying the system to itself." (This is now effected by the new by-laws which were formally carried at the adjourned general meeting held in Exeter Hall on August 17.) He goes on, "When our resolutions and our petitions go forth, swollen by the chorus of ten thousand, ay, and at no distant day, by the volume of twenty thousand voices, even the dull ears of a House of Commons will be startled into an acute and respectful attention." After thus describing some of the causes of our "political powerlessness," he continues, "Let us now consider those that depend upon ourselves. As a profession we are rapidly becoming, if we have not already become, the most broadly educated class in the community." Some years ago the present Premier said there existed "an opportunity for the medical profession to exercise increased knowledge and a greater share in the leadership of thought." Dr. Foster adds, "Six years have passed since these words were spoken, and we still find the influence slow to come. This is in a great measure our own fault. As a class we are too timid and too reticent; we fail to take our due share in the public work of the communities in which we live." There can be no question as to the truth of this charge. "It will do him harm in practice," is the constant remark made upon any member of our profession who may wish to assert his right to hold an opinion of his own. This timidity, this fear of injury to practice, has made cowards of us as a body. We cannot deny the

justice of Dr. Foster's remark. But, instead of reform in this matter, he will probably only get hard words in private from those who know how true his words are and yet fiercely hate to hear unpleasant truths. Dr. Foster sees the selfishness underlying this crouching attitude, for he says, "With some of us, possibly, there may be a lurking fear that pronounced opinions on political or social questions are apt to injure a doctor in public estimation, and so to lessen his professional influence and his pecuniary profits." But, he adds, "no slavish fear of consequences need check us, for if a calling like ours, which entails so much labor and so little reward, necessitated the mean servitude of reticence from prudential motives, it would justly sink from its position of respect as a free and learned profession." Outspoken words these! He urges that those of the profession who have the time should take more part in public work, for "year by year the statute-book receives provisions, of a social and sanitary nature, that demand medical knowledge for their most effective administration. If we help in this we act for the good of our fellow-citizens, but if, from a too close devotion to work or from a selfish love of ease or from a sorry fear of making enemies, we shrink from this duty, can we be surprised that the public estimate of us sinks, and our influence everywhere fails?" Then he contrasts the few medical men in the House of Commons with the position of the profession in Germany and in France,—Virchow the leader of a powerful party, while "the probable successor of Gambetta is a doctor;" while in Italy no less than seventeen medical men are among those elected for parliamentary work. "It is our apathy and our want of courage in the past that has placed us in the position in which we now are, and I look to the rising generation of the profession to enter on a new and nobler course." This statement is a pretty complete vindication of the truth of statements made from time to time in these letters, which have provoked hostile comment.

Things are not as they ought to be in the profession in Great Britain. A certain line of conduct suits the interests of a certain class of minds, and these are studiously, yea, even remorselessly, followed. The great interests of the profession may go to the dogs, a certain class think, provided their individual interests prosper; and if any voice is raised to ask for anything else, they immediately denounce the offender in the press, if they dare; if not, they can backbite him. The difficulty of the bolder units taking the action Dr. Foster holds desirable is, not that the public would resent their coming forward in public matters, but the timid and the envious units would never cease privately to insist that such position was professionally injurious until the public would believe them. The better part of the profession is weighted over

"the load-line" by the selfish element. Dr. Foster thinks this too, for he goes on, "But power will not come to those who stand aside and look on either cynically or timidly at the strife of parties. We must hold ourselves like men willing to take our share in the struggle; we must remodel our institutions; we must organize and consolidate our profession, and infuse into our ranks the self-respect and dignity that come from discipline." It is abundantly clear that a great transformation is needed before the profession can take its proper place,—a transformation of individual thought in many cases. Instead of a truckling policy which those who believe in it force more or less completely upon others who do not believe in it, and who would wish to do rightly, uprightly, and openly, we require to step out with the "sure and certain step of men."

It is, indeed, "the lurking fear of lessened professional influence and pecuniary profits" which induces the weak to combine to press down the strong; it is the rule of cowardice, of want of strict faith to each other, which has emasculated our profession and rendered it politically "impotent." An illustration of the powerlessness of the profession as a body has been furnished by the recent conflicts betwixt the profession and the nursing-sisters. The late Prof. James Symes, of Edinburgh, always asserted a weakness for the old-fashioned nurse, who was a menial (and not always above a reasonable suspicion of a liking for a drop of something now and then), as compared to the modern sister, who claims the feelings and the culture of a lady. But he, with all his foresight, probably never dreamed that the day would come when the nursing-sister would attempt to rise superior to the medical man: yet, from what has appeared in the press from time to time, it would seem that the nursing-sisterhoods, by firm combinations and alliances with members of the governing bodies, have been able to drive the profession into a corner at times. For years Guy's grand old hospital has been before the public as the seat of internal discord; though fortunately it has of late been less conspicuous for such dissension. Ugly rumors have been in circulation for some time about the condition of King's College Hospital. It was nursed by the sisterhood of St. John's House, an earnest but arbitrary body, which gave itself airs of a very unwonted order. The hospital was really under this feminine sway, and as an institution for the teaching of medicine its utility was greatly shaved down by the rules and regulations insisted upon by the dominant ladies; dressing was made as irksome as possible, and the object of instruction was sacrificed to the caprices—for they deserve no higher term—of the sisterhood. Religious enthusiasm is a very fine thing; self-devotion is noble; but the history of religious nursing-sisterhoods

teaches the sad lesson that a woman must possess a very great amount of good principle to carry safely any load of religious enthusiasm; without it the latter carries her away on a flood-tide against which she can make no effectual resistance. Self-abnegation, the merging of the individual in the aggregate, may end in the most assertive self-worship; everything may be sacrificed to formal prayers, which do not seem to carry with them the lesson of humility; spiritual pride is a noxious weed which is apt to flourish in a rank growth of religious feeling; and religious thought is not always accompanied by a commensurate growth of godly action. The attitude adopted by the sisterhood of St. John's House, unless these pious women are sorely belied, has not always been one illustrative of Christian humility, or in full and complete accordance with the lessons taught in the Sermon on the Mount. The devotion of the individual to the community is seen as much in the insect world, amidst bees and ants, as in any of the religious sisterhoods, where the workers are also sexless females,—sexless by the act of the Creator in the one case, sexless by their own will and vow in the other. The devoted sexless female is no longer an individual, she is a unit of a community; and her merging of self is complete. But the actions of these communities are not always defensible, and King's College Hospital has drifted into increasing difficulties under the sway of the sisters of St. John's House. A great portion of its invested funds has of late been sold out in order to enable the present régime to carry on its practices; and after the last annual meeting it was said that notice would be given to the sisterhood as one part of the reform which was evidently becoming imperatively necessary if the institution was not to be looked upon as being hopelessly insolvent. Further, the "aggressive attitude" of the matron had long been an offence to the staff and the students,—two not altogether unimportant matters in a teaching-hospital. "At length, however, the acme of toleration has been reached, the resignation of the matron insisted on, and, after prolonged refusal, received," says one of our medical journals. Where was the personal self-respect of the fanatic, that she could not go when her presence had become so objectionable that it was decided to suffer it no longer? How was it she clung frantically to her place, and required reiterated intimation that go she must? But a more curious chapter in the history of religious arrogance is furnished by the fact that the forced resignation of the matron was followed by the sudden withdrawal of the sisterhood without notice, so as to leave the hospital crippled. Where were their professions of Christianity and their vows upon that occasion? It is said that their amiable malignity went further than this: the nurses were called in, and,

on pain of instant dismissal, commanded to resign their posts. It is quite clear that every consideration but their own wilful caprice, their own weakness, wickedness, and folly, had been flung to the winds. Prevented from doing further injury to the institution whose bane they have been for long, their last act, like the fleeing Parthian's arrow, was to try to inflict a grievous wound on the institution by leaving it utterly helpless. "All honor, be it added, to the nurses who, notwithstanding the absence of pretensions claimed by 'lady' nurses, remained with true womanly pity at their posts beside the beds of suffering patients, while their cultivated 'superiors' followed in the wake of the indignant matron." The journal continues, "Spite of the temporary inconvenience, the authorities of King's may congratulate themselves on a good ridance of women who could be guilty of so grave a dereliction of duty; and there can exist no doubt that this exhibition of feminine malice has done a great deal to alienate the sympathies of the right-feeling section of the supporters of these sisterhoods." Another journal, commenting on the action of the matron and sisters in their impish malice in trying to cripple the hospital as their final act, says, "The whole circumstances illustrate the danger of handing over the nursing of a hospital to a foreign power, and the difficulties resulting from the exaggerated pretensions of some nursing-sisterhoods." Yet, despite these outspoken judgments, in harmony with notorious facts, it is curious to see a letter from one of the supporters of the ladies, in this journal: "Sir, you are incorrect regarding your statements concerning the lady nurses at King's College Hospital, as they were discharged in the most unjust and peremptory manner, and at great inconvenience to themselves, by the members of the Council, merely because a little since the matron, Sister Aimée, reported a case of supposed irregularity by a doctor towards one of the patients. I speak as a parent of one of the lady nurses.—M.D." Poor victims! martyrs to a sense of duty! "Supposed irregularity." It might have been as well, possibly, if she had been sure of her ground.

This piece of meddlesome impertinence is the plea, then, for the grossest ill usage to those unoffending creatures. We see "asinine paternal pride" in many of its phases; but what can be expected of the social position of medicine when such traitors are in its ranks as this M.D.? His intellectual spectacles are sadly chromatic, I fear; his duty to his profession a poor withered limb compared to his fatherly interest in his "lady-nurse" daughter. He would have done much better if he had adopted the old plan, "whipped her and put her under the pump," than inditing such a pitiable production. Perhaps, after all, our position is quite as good as we deserve.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN GYNÆCOLOGICAL SOCIETY.

THE American Gynæcological Society held its eighth annual meeting at the Hall of the College of Physicians, Philadelphia, September 18, 19, and 20, holding morning and afternoon sessions. Gilman Kimball, M.D., of Lowell, Massachusetts, President of the Society, and Albert H. Smith, M.D., Vice-President, occupied the chair during the meeting. The membership of the Society is limited to sixty Fellows, about half of whom were in attendance, besides a number of invited guests and members of the profession. The papers read were up to the standard, and the discussions were able and spirited. After the morning sessions lunch was provided by the resident Fellows, and on Thursday evening a supper was given at St. George's Hall, by the Philadelphia Obstetrical Society, which passed off pleasantly. Altogether the meeting was declared to be as successful and satisfactory as any which had been held by the Society.

FIRST DAY'S PROCEEDINGS. — *Morning Session.*

The President called the meeting to order, and the Secretary recorded the following names as present: Fordyce Barker, New York; Robert Battey, Georgia; B. B. Browne, Baltimore; William H. Byford, Chicago, Illinois; J. H. Byrne, Brooklyn, New York; Henry F. Campbell, Augusta, Georgia; James R. Chadwick, Boston, Massachusetts; Edward L. Duer, Philadelphia; T. Addis Emmet, New York; Frank P. Foster, New York; William Howard, Baltimore; J. V. Ingham, Philadelphia; A. Jackson Reeves, Chicago; J. T. Johnson, Washington, D.C.; Gilman Kimball, Lowell, Massachusetts; W. T. Lusk, New York; Matthew D. Mann, Buffalo, New York; C. D. Palmer, Cincinnati, Ohio; Theophilus Parvin, Philadelphia; Thaddeus Reamy, Cincinnati; J. C. Reeve, Dayton, Ohio; Albert H. Smith, Philadelphia; R. S. Sutton, Pittsburg, Pennsylvania; Ellwood Wilson, Philadelphia; H. P. C. Wilson, Baltimore; Ely Van de Warker, Syracuse, New York. Some others were in attendance later whose names do not appear.

An Address of Welcome on behalf of the resident Fellows was delivered by Edward L. Duer, M.D. The Secretary read a communication from the Council announcing that the following had been made members by invitation: Alfred Stillé, M.D., President of the College of Physicians of Philadelphia; William M. Welch, M.D., President of the Philadelphia County Medical Society; Richard A. Cleemann, M.D., President of the Philadelphia Obstetrical Society; James Tyson, M.D., President of the Philadelphia Pathological

Society; Robert P. Harris, M.D., of Philadelphia; and I. R. Page, M.D., and Robert T. Wilson, M.D., of Baltimore, Maryland.

Superinvolution of the Uterus.

The first paper read was by Joseph Taber Johnson, M.D., of Washington, D.C., upon superinvolution of the uterus. He said that although this morbid condition was recognized and described thirty years ago by Sir James Simpson, and is not an uncommon affection, yet it is infrequently referred to in text-books. Frommel found that it was present in about one per cent. of gynæcological cases, and Simpson thought that the number of cases would be found to be much greater if they were properly looked after. It is to be differentiated from atresia of the uterus, undeveloped uterus, or one which has been changed by inflammatory processes. The condition of superinvolution is one of excessive action of the physiological processes of involution occurring after the cavity of the uterus has been distended by any growth, normal or abnormal: thus involution to an exaggerated degree may follow parturition or abortion, hydrometra, physometra, hydatids, the removal of large fibroid tumors, etc. He reported four cases in his own practice.

Case I., aged 26, commenced to menstruate at 14 years of age, and continued to do so regularly until she became pregnant, five years ago, and was delivered with the forceps; the child was still-born. On the third day symptoms of septicæmia developed, and a laceration of the cervix and perineum was found, but no metritis. She subsequently made a good recovery, except that she had an offensive leucorrhœa and sick headache at her menstrual periods. After two years had passed, her abdomen began to enlarge, and she supposed herself pregnant again, and made the usual preparations; her headaches now were relieved. About the time that she expected her confinement the abdomen rapidly decreased in size, and the tumor disappeared. Her menses had not appeared since her former pregnancy, although her health was good and she had gained flesh. Upon examination the uterus was found to be less than two inches in depth; the edges of the laceration had never healed. He performed trachelorrhaphy last year; the operation was successful in curing the offensive leucorrhœa, backache, and headaches, and in restoring sexual appetite. The general improvement was marked, but the menses have not returned, although electricity and the ordinary treatment were employed. She has now the appearance of robust health, although she does not menstruate. Simpson and others class these cases as invalids, and as subject to nervousness, and predict early death. Her case is an exception to this rule.

Case II., now 30 years of age, had been married ten years, and had a miscarriage

several years ago, from which she made a good recovery. In addition to this history, she reported that four years ago her abdomen had swelled, and afterwards she discharged a large amount of water from the vagina. At the time she consulted the reporter her periods only lasted for one day; sexual appetite was preserved, and she was anxious to have a child. The uterus was found to measure less than two inches in depth. Electricity, massage, and the usual treatment was followed, but without marked success; her menstrual period extended to seven days, and then, after coitus, stopped for several months, when she thought herself pregnant again, but she was disappointed. No benefit was derived from the treatment.

Case III. menstruated at her seventeenth year. She was 29 years of age, and had been married five years, but had never been pregnant; it was, therefore, not truly a case of superinvolution, as no history could be obtained of distention of the uterus, but her appearance was exactly like the preceding case. The uterus seems insensitive, freely movable. Having speared it with a sharp knife, applied electricity, etc., no marked result was obtained.

Case IV. was a patient in the Provident Hospital. She had had two children, both of whom died, and she was anxious for another. Her periods lasted only a few hours. The uterus measured only one and three-quarter inches; it was, like the others, insensitive. Nothing was obtained by treatment. It was evident that she had reached the climacteric prematurely; none of her family, however, so far as she knew, had changed at such an early age.

The results of these four cases are certainly not encouraging, but they are as good as those obtained by others. Simpson reported several cases with like results. Whitehead reports a case in which the uterus and ovaries completely disappeared after labor. Scanzoni recognized atrophy of the uterus after labor. Prolonged lactation has also been assigned as the cause by Frommel. It could not have been the cause in two of these cases, because in one the child was still-born, the other was a miscarriage. Dr. Edes considers that in some cases it is the natural result of parturition: the reproductive powers have been exhausted by one supreme effort. From whatever cause it may arise, this condition exists, and should be recognized: electricity should be tried for its relief, but the cases are usually incurable.

DISCUSSION.

Dr. Fordyce Barker, of New York, being called upon by the Chair to open the discussion, said that with regard to the term superinvolution, some authorities would restrict its use to a reduction in the size of the uterus below the natural size of the organ, after con-

ception. He thought it perfectly proper to apply the term to any case in which this process occurs to an extreme degree, as after the removal of fibroid tumors, false conceptions, or other objects within the uterus. It seemed to him as if it might also be applied to some cases of uterine catarrh in which these identical changes have occurred, and, in fact, to all cases where retrograde processes have gone on to an abnormal extent. With regard to its frequency, the practitioner with a large consulting-practice will be likely to see a greater number of these cases than other physicians. He believed that he saw two or three cases every year.

He would, in conclusion, refer to another point not mentioned by the writer of the paper, but which had been taking form in his mind for several years. He had never published it, but had mentioned it to friends; he had never seen it referred to in medical literature. In making his decision whether we shall allow the patient to undertake the expense of treatment, he always took the precaution to examine into the condition of the ovaries,—if they are associated in the diseased condition and are atrophied or defective, or if they are active in their functions. If the latter is the case, and at each monthly period there is great systemic disturbance, there is an effort of nature to relieve the plethora of the pelvic organs, the patient will be one who will be benefited by treatment; the others, where such nervous symptoms are absent, will not be benefited. He cited the following case. A lady 24 years of age, the wife of a physician, owing to an accident, being in a carriage during a runaway, had an abortion at the sixth month of pregnancy. About two months later, when menstruation should have returned, there was great constitutional disturbance, backache, etc.; but there was no discharge. She was a large, strong woman, weighing 208 pounds, and in apparent health. On examination, the uterus was found to be small, extremely small, and the cervix did not show the slightest evidence of a past pregnancy. She was kept under treatment; electricity was systematically applied, the cervix was dilated with bougies, and she was given a pill containing ox-gall, aloes, sulphate of iron, and other remedies as needed. After three years' treatment she became pregnant, and he delivered her of a living child with the forceps.

He recalled another case of a lady, who, while travelling in Europe, from over-fatigue had a miscarriage, which was attended with great hemorrhage. She never menstruated afterwards, although for several days each month there was great disturbance of her nervous system, each period terminating in a sharp attack of diarrhoea. After being put on a similar course of treatment, she also became pregnant and was delivered of a living child.

The main point in the prognosis and in the treatment is to discover whether the superinvolution of the uterus is accompanied by loss of the function of the ovaries, or is associated with active ovaries: in the latter condition, the uterus may be restored; where this is not the case, treatment is of little use.

Dr. A. Reeves Jackson, of Chicago, was surprised at the statements of the paper as to the comparative frequency of this condition. He had himself seen only a single case, and that was of doubtful diagnosis. Several years ago, a woman was admitted to the hospital with which he was connected, in Illinois. She was 32 years of age; her youngest child was five years old. She had been obliged to feed the child artificially because of insufficient lactation, and had weaned him entirely at five months. When she came under observation, the breasts were flabby and withered, the skin on her neck was wrinkled like an old woman's. There was very marked atrophy of the uterus, even more than usual in senile atrophy; the ovaries could not be detected at all. He finally succeeded in passing a probe through the very small os, but was surprised to find it pass in several inches: he discovered, to his dismay, that he had penetrated the fundus uteri. He did not know at that time that this accident is neither very rare nor very dangerous; in this case it produced no bad symptoms. He afterwards inserted a galvanic stem-pessary, but without results. Here is a case of difficulty in diagnosis: was it a case of premature climacteric? He thought that this might not apply to many cases, however. But here the atrophy of the uterus is due either to superinvolution or to premature menopause. The practical point in diagnosis submitted by the last speaker is well worthy of consideration.

Dr. Ely Van de Warker, of Syracuse, called attention to a possible source of error in diagnosis in superinvolution of the uterus. After laceration of the cervix there is often marked atrophy of the cervix, which does not extend to the fundus. He had never seen it except as the result of laceration. The length of the cavity of the uterus itself remains unaltered, but that of the cervical portion is very much reduced, and more in the posterior than in the anterior lip. Why it should be more marked posteriorly than anteriorly he could not say. He could easily see how a large proportion of the cases reported as superinvolution of the uterus might be of this character, and was inclined to think that one of the cases mentioned in the paper was of this character.

Dr. H. P. C. Wilson, of Baltimore, regarded the condition as extremely rare: in all his practice he had seen only two or three cases. He endorsed the remarks of Dr. Barker as to the distinction between those who can be benefited by treatment and those who cannot be. Where the ovaries are not active he had not been able to get the slightest benefit from

treatment, but in the others, where the ovaries remained normal, he had been able to benefit his cases.

Dr. Robert Battey, of Georgia, confirming the remarks made by Dr. Barker, said that atrophy of the uterus is a constant result of the operation with which his name had been connected. In most of these cases of oöphorectomy the uterus is not diseased, but is healthy; but its function is interrupted by the operation. He believed that superinvolution of the uterus is due, therefore, rather to disease of the ovaries than of the uterus, because he has known this to occur very commonly after removal of the ovaries. He had never seen it follow removal of the Fallopian tubes alone, and in this view differs from Lawson Tait; indeed, he doubts if it ever occurs from simple removal of the tubes.

The best remedy is electricity, applied so as to pass the current through the ovaries rather than to the uterus itself. Dilatation of the cervix with sponge tents should also be commended.

Dr. William H. Byford, of Chicago, said that he had listened with interest to the communication of Dr. Johnson because it is on a subject which has not been exhausted by the profession. He thought that great confusion and want of distinct knowledge obscured the whole question at present. He inquired, Is there any difference between superinvolution and atrophy, or is superinvolution a step on the road to atrophy? He believed himself that a decided difference exists between superinvolution and atrophy, although in the great number of cases it is merely a stage in this process. He would consider superinvolution as a condition in which the uterus preserves its normal characters and its normal functions, though reduced and dwindled in size. He agreed with the first speaker that the cases should be divided into the simple form, involving the uterus alone, and the complicated, in which the ovaries participate; for although the process may go on in both *pari passu*, yet it may go on to a much greater extent in the uterus than in the ovaries. He believed that if the ovaries should become very much reduced from superinvolution, the uterus necessarily becomes so. He also agreed with the statement that when the ovaries partially retain their functional activity the case may be cured. Wherever the symptoms indicate that the ovaries are still active, we may get the best results from treatment; when these symptoms are absent, no hopes can be entertained. He believed that the time would come when, in the development of our knowledge of these processes, what superinvolution is and how it is brought about will be better known than it now is. In the mean time, the treatment mentioned, with the use of a pessary to keep up irritation between the periods, in the hope of stimulating local congestion, might be of service.

Dr. Henry F. Campbell, of Augusta, Georgia, said that he did not consider it necessary to the existence of superinvolution that there should be either atrophy of the ovaries or atresia of the uterus. He referred to a case in which there had been extreme distention, which was sufficient to cause barrenness, although ovulation apparently continued. He was called in consultation to see a case in which the attendant physician declared himself unable to determine whether the fluid was in the peritoneal cavity or in the uterus. The woman was about six months pregnant. She had an immense abdomen, and it was very tense. The woman was obliged to lie upon her side on account of this enormous collection of fluid, and her condition was serious. He determined to bring on premature labor, and did so, and a fetus was discharged, with about a pint of amniotic fluid. Fearing that they had made a mistake, they were preparing to tap the abdomen with the trocar, when, upon making a preliminary vaginal examination, another bag of water was found protruding from the uterus, which evidently contained a blighted twin fetus, with dropsy of the amnion. The membranes were punctured and gallons of water were expelled. The patient rapidly recovered. Although she had had children regularly every fifteen or eighteen months before this occurred, she never conceived again; yet the menstrual nixus and menstrual discharge continued. The ovaries continued physiologically active, but the woman never became impregnated again. The theory on which he had accounted for this sterility was that the over-distention of the uterus had resulted in a loss of muscular power, just as over-distention of the bladder sometimes causes permanent weakness and impairment of function. He inquired if this theory might not account for some cases of barrenness after extreme distention of the uterus, without reference to the ovaries.

Dr. Johnson, in closing the discussion, accepted the point raised by Dr. Barker, which seemed to be an important one, both in diagnosis and in treatment. There is a difficulty, however, in dividing the cases absolutely, but their condition at the menstrual periods, will serve as a guide as to whether the ovaries are active or not.

The distinction made by Dr. Van de Warcker he coincided in, and he had been of the opinion himself for a long time that the case referred to was really one of atrophy of the cervix; but such cases usually recover after trachelorrhaphy, and menstruation returns. It was not so in her case, although her health is robust and the operation was successful in restoring the parts.

In reply to Dr. Jackson, he said that he had not claimed that it is very frequent, but that it occurs often enough to demand our attention. Dr. Byford's division is essentially that of Dr. Barker. The treatment

recommended was that which had been pursued, and which he would continue, and will report further results at a future meeting.

The Importance of Cleanliness after Surgical Operations.

R. Stansbury Sutton, M.D., of Pittsburg, read a paper, in which he gave the results of his observations while on a visit to some of the great clinics in Europe. He directed especial attention to the fact that a great change had taken place in surgical methods within a few years, and this is especially evident in the cleanliness which surgeons everywhere endeavor to secure during surgical operations and in the treatment of wounds. Formerly it was thought that all the bad influences came from within, and wounds were left open and encouraged to discharge freely, in order to purge them. Now there is a return to the earlier treatment of Galen, and wounds are closed and protected as much as possible from outside sources of infection. The cell theory led naturally to the germ theory of disease, and, as the microscope kept pace with progress, organisms were detected in the discharges from wounds, and these were regarded as noxious agents.

The object of the treatment introduced by Lister was to keep these septic organisms out of wounds, and he introduced carbolic acid and insisted upon cleanliness. The result of his teachings is that surgery has achieved better results than ever before; and yet the most active opponents of Lister are those who adopt his principles of treatment, simply modifying it by omitting the spray, or substituting other agents for carbolic acid. He denied that carbolic acid is synonymous with Listerism, or even necessary to it. Some antiseptic may be found that is better for the purpose; it is not essential. Strict attention to cleanliness in all the details of the operation, in order to keep the wounds aseptic, is the great principle of Mr. Lister's treatment. Keith is such an expert in cleanliness that he can dispense with carbolic acid; and Lawson Tait exercises the greatest care to prevent infection of wounds, so that he also can dispense with this agent and yet have good results. German surgery was formerly considered extremely dirty; now a visit to the operating-rooms of Esmarch, Volkmann, Schroeder, Nussbaum, Koeberle, and others will show the most minute attention to cleanliness, although various minor modifications of the Lister treatment have been made. Listerism, or something else, has taught them the necessity of cleanliness.

DISCUSSION.

Dr. Barker asked the Chair to call upon Prof. Gross, the Nestor of American surgery, to open the discussion, as he was in the room.

Prof. Gross said that he was much obliged to the Society for the honor, but he must decline,

as he had come merely to listen and be instructed, and not to talk.

Dr. T. A. Emmet, of New York, in response to an invitation from the President, stated that he had nothing to add to the statements in the paper; he agreed with the lecturer perfectly. He had previously expressed the opinion that the death-warrant of the patient is too often carried under the finger-nail of the surgeon; and, since he had been abroad on a visit to the clinics mentioned, he had trusted to soap and water in preference to other antiseptics. The operator may keep himself clean, but it is very difficult to control the assistants. Lawson Tait even goes so far as not to allow any one to touch the wound or the sponges that he uses except himself, and declines the aid of an assistant.

Dr. Wm. T. Lusk, of New York, said that the paper that had just been read contained statements that would be accepted by the most ardent Listerite. He would, however, take exception to the remark that the carbolized spray should not be used unless the surroundings are impure. He thought that the danger of the spray had been exaggerated. Cleanliness, of course, is required, but, in addition to ordinary cleanliness, Mr. Lister aimed by his methods to exclude impalpable causes of disease by the use of carbolic acid. Though micrococci resist five-per-cent. solutions of carbolic acid, yet the bacteria which cause putrefaction are destroyed by this agent. He could not feel prepared to give up the spray, as he had used it successfully in operations at the hospital which he would not dare to perform without it, as such operations previous to the use of the spray were generally fatal. He had operated for ovariectomy at Bellevue Hospital in a tainted ward with perfect success under the spray, although some of his colleagues were of the opinion that under ordinary circumstances it would be simply murder. Last winter he had operated upon four cases, all presenting peculiar difficulties: in only one of them was there a rise in temperature as high as 102° , and that only for a few hours. He believed that he could not obtain as good results without the spray as with it.

Although the lecturer states that all of Keith's cases in which the spray was used died, and all those operated on since recovered, it does not follow that they died because of the spray. He could not forget that when he visited Keith, some years ago, when he had reached his forty-fifth successive successful case of ovariectomy *with the spray*, he got out his case-books to prove that the London men must come to the spray. He also stated that, whereas before the use of the spray he felt obliged to visit his patients three or four times a day, since employing it he only was obliged to visit them once a day. Certainly, very much must be attributed to experience in operating: this is the secret of Mr. Bantock's

success. Mr. Lawson Tait carries out all the details of the antiseptic treatment, except cleanliness. After watching him operate, one can only arrive at one conclusion,—his exceptional results are due in great amount to his personal skill and address. In removing the ovaries he makes an incision only three-fourths of an inch in length; adhesions are torn up by the finger. He operates very rapidly, requiring only a few minutes: the result is that there is very little shock, and one of the principal conditions leading to septicæmia is wanting. While such an operator may safely do without the spray and other details of Listerism, yet for operators of less skill, and under less favorable conditions, the spray is still needed.

Dr. Wilson, of Baltimore, said that the profession owes a great debt of gratitude to Mr. Lister, and he had been surprised to find gentlemen crying out against Listerism and at the same time using all the details of Listerism except the spray. He had the pleasure of seeing Mr. Keith operate lately, and this operator told him that no woman ought to die of ovariectomy if she came for treatment sufficiently early. The greater success from the operation lately may be due to the fact that patients are willing to have the operation performed, instead of putting it off until they are ready to die. He thought it possible to use too much carbolic acid, and, on account of this, he does not employ the spray during the operation, but before it, in order to purify the air. Mr. Keith said that he was struck more and more with the wisdom of Lawson Tait in not having many assistants. The surgeon cannot be responsible for his assistants, although he may be clean himself.

Dr. Campbell said that surgeons were careful with regard to their patients before Mr. Lister talked about carbolic acid at the International Congress, and he thought it a great injustice to ascribe all cleanliness, past and present, to any one man. His statistics of amputations are as good as those of the surgeons who use carbolic acid, and he mentioned a case in which blood-poisoning and delirium were caused by carbolized solutions.

Dr. Sutton, in closing the discussion, protested that carbolic acid is not essential to Listerism, and believed that in abdominal surgery it had done more harm than good.

In reply to Dr. Lusk, he said that the statement that Lawson Tait uses Listerism, except the spray, was incorrect. He does not use a single drop of carbolic acid for his operations. The only antiseptic that he uses is boiling water; and, instead of using carbolic acid for his sponges, he carefully washes it all out in clean water before operating. The speaker believed him to be perfectly honest in his antagonism to Listerism.

Tait and Bantock, of the Samaritan Hospital, stand alone in their opposition to carbolic acid, and he would not hesitate to say

that he thought that the day of the carbolic acid spray is over. As far as the object of disinfecting the room is concerned, the spray is simply worthless: if the floor be sprinkled, so as to keep the dust from rising, it will be more to the purpose.

The question of assistants is very important. Keith has only one, Tait very few, Billroth very many. There is also a great difference as regards the character of the cases. Billroth operates upon everything that deserves a chance of life. Some others, on the contrary, select their cases carefully. He, therefore, would place no reliance on statistics, in this class of operations particularly.

Afternoon Session.

The following were made members by invitation: Prof. S. D. Gross, of Philadelphia; R. P. Maury, M.D., of Memphis, Tennessee; and W. P. Chunn, M.D., of Baltimore.

Hot Water in Secondary Hemorrhages after Pelvic Operations.

Dr. Albert H. Smith read a paper advocating the hæmostatic properties of a stream of hot water after operations on the pelvic organs, as well as to prevent post-partum hemorrhage by using it immediately after the placenta has been expelled. He had found that hot water would check hemorrhage even in a hemorrhagic diathesis, and expressed surprise that Dr. Skene had considered this a contra-indication to certain operations. The following points he submitted for discussion: (1) the great superiority of the hot-water douche over all other means of arresting hemorrhage; (2) its efficiency when carried directly to the bleeding surface; and (3) its simplicity.

DISCUSSION.

Dr. Reamy said that he was in the habit of irrigating the surface with a stream of hot water during operations upon the perineum, thus avoiding the use of sponges.

Dr. H. P. C. Wilson approved of the use of hot water for the purpose named both in pelvic operations and in post-partum hemorrhage. He referred briefly to a case in which he had saved a patient's life by its use, where free bleeding had followed removal of both ovaries through Douglas's cul-de-sac; he had injected gallons of hot water, washing out large clots from the abdominal cavity, and had succeeded in stopping the bleeding.

Dr. Campbell recalled a case, many years ago, of vesico-vaginal fistula in which he had to relinquish the operation on account of the hemorrhage. He thought that with the aid of hot water he might have finished it, but he did not know of its use at that time. In post-partum hemorrhage he uses warm water to wash out the uterine cavity, and then injects iodine. He called attention to an instrument—the metroclast—which has a sort of wire cage around the long nozzle of a Davidson syringe.

By this expedient the water is allowed to escape as rapidly as injected.

Dr. Mann said that he had used it a great deal in post-partum hemorrhage and after removal of fibroid tumors with success, but he had a case two years ago where the injection of hot water failed to stop the bleeding. It was a case of cancer of the cervix, in which he had removed the intravaginal portion of the cervix and had checked all bleeding; but, seeing a small piece that he thought should be removed, he snipped it off with the scissors, and free bleeding followed. He injected vinegar and hot water, but without the slightest effect. He tamponed, with no better success. He then applied Paquelin's cautery, and stopped the bleeding, but the patient was exsanguine, and died in ten minutes. Dr. Mundé had a similar case, both being reported at the New York Medical Society on the same evening.

He would not dispute the value of hot water as a hæmostatic, but thought that we should not place reliance upon one form of treatment alone.

Dr. Goodell thought that Dr. Mann had asked too much of the hot water, as the hemorrhage was evidently from a large-sized vessel. He had found it extremely valuable where oozing occurs, especially after ovariectomy. He thought it effective even beyond the limit of its actual contact, for in cases of menorrhagia it will check the bleeding, although only thrown into the vagina. Vinegar, on the contrary, must reach the bleeding surface in order to do good. He would consider hot water as having a double advantage in its local and its indirect action. For open wounds he prefers vinegar, and in post-partum hemorrhage he uses hot vinegar.

Dr. Barker called attention to one point of importance in attempting to decide whether hot water is the best agent to use in a given case or not. The hot douche requires some time—ten or fifteen minutes—to check bleeding; in some cases a more prompt hæmostatic would be needed to save life. He mentioned a case of hemorrhage from laceration of the vagina which resisted hot water for half an hour, and one of cancer of the cervix where bleeding persisted in spite of the hot water. In the latter case he applied a compress dipped in Squibb's ergot, and a tampon, which stopped the bleeding.

Dr. Byford fully concurred in the conclusions expressed in the paper.

Dr. Campbell said that he was reminded that there are cases in which it is important to decide the greater appropriateness of one hæmostatic over another. In cases of post-partum hemorrhage, anything that will stimulate the muscular fibres of the uterus to contract will stop the bleeding. In cancer it is different: here a styptic would be necessary. Iodine would be of no use in cancer, because it is not a styptic; but it is useful in post-

partum hemorrhage, because it stimulates the uterus and causes contraction.

Dr. Smith said that with regard to Dr. Mann's case he would say that he had had a precisely similar case in which the hot water was used successfully. In order to get the desired effect, it is necessary to have the hot water reach the bleeding spot; if profuse, the bleeding may prevent the hot water from reaching the spot. In such cases it is necessary to elevate the hips of the patient, so that the blood may gravitate to the upper part of the body: then the bleeding becomes less, and the hot water acts better. He would not claim that there might not be cases in which it would be inapplicable, as no remedy in medicine can be used in all cases without exception. He simply called attention to the simplicity, convenience, and efficiency of hot water. In reply to Dr. Goodell, he thought that the principle was the same whether the hot water was used with vinegar or with any other agent, such as carbolic acid or Labarraque's solution.

With regard to having a more prompt hæmostatic, he would be very glad to get one, but he had never seen anything in the use of ergot to warrant its substitution for the hot water. In reply to Dr. Campbell, he would state that he had seen cases after labor where the uterus contracted firmly, but blood spurted away in a stream as large as a goose-quill, and it was stopped by hot water. He thought that this remedy, though perhaps not available on all occasions, is valuable, easily applied, and rarely fails to check hemorrhage.

Some Points connected with Dysmenorrhœa.

C. D. Palmer, M.D., of Cincinnati, said that dysmenorrhœa is a common affection, and troublesome to treat, and should therefore have its pathology well understood. He gave a brief review of the mechanical theory of Mackintosh, Simpson, Simes, and others, and stated that while obstructions undoubtedly do exist and may give rise to painful menstruation, he believed this to be the case in comparatively rare cases. The objections to the mechanical theory of dysmenorrhœa are (1) the want of uniformity between the cause and effect, the same amount of obstruction giving rise to different symptoms in different cases. The most severe sufferings may attend a condition of the canal which admits the passage of a moderate-sized sound, or which may show no stenosis whatever. In those where the local obstruction is the greatest the symptoms are often less marked than others affected to a slight degree, and the pain may reach its climax without there being anything in the uterine canal to account for it. (2.) Constitutional treatment is more effective than local measures: chalybeate tonics and agents which increase the flow of blood relieve the pain rather than increase it. (3.) The course of the menstrual blood may be as uninterrupted in a curved uterine canal as in a straight one,

but congenital cases of flexion are attended by dysmenorrhœa, but similar conditions coming on in adult life rarely are. (4.) There are cases of dysmenorrhœa in which no fault of conformation can be detected in the uterus or any of its surroundings. On the other hand, atresia may exist without pain. From these and other considerations he concluded that the mechanical theory of dysmenorrhœa was not demonstrated.

Dysmenorrhœa is, therefore, a functional disorder of the uterus which is at its base a neurosis. It is especially due to bad inheritance, poor hygiene, and vicious methods of education.

In treatment, he recommended local measures to reduce the extreme sensitiveness of the uterine mucous membrane, such as dilatation by bougies, and various applications, also electricity. In addition, constitutional treatment is required by open-air exercise, good food, iron, arsenic, phosphorus, nuxvomica, quinine, etc. He believed that stenosis is more frequent at the outer than at the inner os, and this explains the greater frequency of barrenness than of dysmenorrhœa. It is easier for the menstrual fluid to escape than for the spermatic fluid to gain entrance. As in these cases the retention of the menstrual fluid may cause secondary changes, it is better to dilate early. He preferred dilatation by bougies to incision, which has been too much relied upon and has been overrated. Time has fixed the value of incision of the cervix, and has greatly limited its range of application.

DISCUSSION.

Dr. Chadwick agreed with the author of the paper: he had to a very large extent given up the idea of obstructive dysmenorrhœa. He rarely used incisions except in cases of constriction of the canal at the external os. The dysmenorrhœa of many women is due to spasmodic contraction of the uterus from peristaltic action of its muscles, from some local cause of irritation, such as catarrh, just as is seen in fissure of the anus; in others the disease is purely a neuralgia. When the neurotic element is strong he gives before each menstrual period bromide of sodium (gr. xx, three times a day), and during the attack he gives fluid extract of coca and ammonium chloride. He never gives such patients morphia.

He had not for many years met with a case in which dysmenorrhœa was due solely to flexure of the uterus, but he had found this condition coexisting, both being due to imperfect nervous development.

Dr. Barker said that he fully concurred in the views of the author of the paper. He believed that the proportion of cases with dysmenorrhœa due to obstruction is very small. Some women suffer with dysmenorrhœa until they are married and bear chil-

dren, but never after; in others this is not the case.

It is important to inquire what the pain is like. There are two forms of dysmenorrhœa: one is referable to the state of the uterus at the time; the other belongs to the ovaries, it is ovarian in its origin, and requires attention to them for its cure. We must recollect that menstruation involves two processes,—first, rupture of a Graafian follicle, and, secondly, rupture of the capillaries in the uterine mucous membrane,—one ovarian, the other uterine. Where the pain decidedly precedes the flow, it is ovarian; where it continues during the flow, it is uterine.

Every year he sees cases of young girls who come from the country to school in New York City to finish their studies. After three or four months they suffer with dysmenorrhœa, and the flow is scanty. Here the pain usually precedes the discharge, showing the effect of lowered vitality upon the ovaries.

In the treatment he most frequently employs lactate of iron (gr. iii-v, s. t. d.), generally associated with chlorate of potassium, which exerts a special effect upon the pelvic organs, commencing this about ten or twelve days before the menstrual period. The time to give it is when the patient shows symptoms of constitutional disturbance: she is irritable, nervous, languid, over-sensitive, has pain in the eyes, etc. In the interval he gives apiol, two capsules after each meal, which he regards as almost a specific. Where the patient has strong vitality, is robust, and shows too much ovarian excitement, he gives bromide of sodium between the principal meals and at bedtime. This class of cases is one which includes young widows, patients who never suffered from uterine trouble before or during marriage, but exhibit great ovarian excitement afterwards. Nothing can be found to explain it upon vaginal examination. The sodium bromide he prefers to the potassium salt, as it is less likely to cause an eruption upon the face, a matter of some moment to young women.

SECOND DAY.—*Morning Session.*

Gilman Kimball, M.D., of Lowell, Mass., delivered the annual address of the President, taking for his topic a *Biographical Sketch of Dr. Nathan Smith, of Vermont, the Founder of Dartmouth Medical College*. He paid a generous tribute to the personal worth and professional attainments of Dr. Smith, who, in July, 1821, performed the second successful case of ovariectomy that had ever been done in this country. As he was not aware that McDowell had preceded him in the operation, it was entirely original with him, and in point of merit he stands equal to McDowell, and should have equal honors.

Prof. Gross, being invited to make some remarks, said that, nearly thirteen years hav-

ing elapsed between the operation of McDowell and that of Smith, the latter operator had abundant time to have learned of the former operation, and should have known of it, as an account had been published in 1816. He thought that one of the greatest of Dr. Smith's achievements was the bringing into the world of Dr. Nathan R. Smith, of Baltimore.

Dr. Kimball explained that intercourse between the East and the West was difficult and slow at the period to which he had referred, and it was possible that Dr. Smith knew nothing of the earlier operation, and the speaker fully believed that he did know nothing of it.

A Rare Form of Abdominal Tumor.

Dr. Thad. A. Reamy described three cases of a rare form of abdominal tumor. Upon examination they were discovered to be cystic, containing bloody fluid in two cases; the other case died, and at the post-mortem sarcoma of the omentum was discovered. This raised the question whether or not the other cases, which now enjoy good health, would have become sarcomatous if not tapped, or whether the other one had degenerated into a sarcoma. He presented the specimens taken from this patient, from which it would appear that it had been originally a cyst of the omentum, in the walls of which sarcomatous tumors had developed. The patient had died from rupture of this cyst into the peritoneal cavity, causing peritonitis.

DISCUSSION.

Dr. Sutton, of Pittsburg, concurred in the statement of the rarity of these tumors. He did not think it possible before the abdomen is opened to decide whether an omental tumor is carcinoma or sarcoma. He considered it bad treatment to plunge a trocar into the collection, and advocated abdominal section, but thought there was little hope of prolonging the life of the patient if the growth be either carcinoma or sarcoma: one is as malignant as the other. He believed that when the exploratory incision reveals a malignant growth the abdomen should be closed and the operation abandoned.

Dr. Campbell said that as omental growths are usually pedunculated he thought it worth the risk to remove such tumors after the exploratory incision had been made and there were no extensive adhesions.

Dr. Reamy, in closing, said that he could not quite agree with Dr. Sutton as to the impropriety of tapping, and called attention to the fact that the two which were tapped recovered. He said it was a curious fact that in the patient with the sarcomatous growth no cachexia was present; the other two cases could not have been sarcomatous, because they recovered.

*Congenital Fissure of the Female Urethra,
with Exstrophy of the Bladder.*

Henry F. Campbell, M.D., of Augusta, Georgia, presented a paper in which he described a case of congenital fissure of the urethra in a little girl two years of age, with exstrophy of the bladder, which appeared as a vascular tumor in front of the urethra. The upper wall of the urethra presented a flattened appearance; there was but very little trace of a lateral border. The other portions of the vulva were normal, and there was no deficiency in the pubic bones. He regarded the case as analogous to the condition of hypospadias in the male. He inquired as to the proper time for operation, and whether it would not be better to wait for the development of the parts at puberty. He feared that an immediate operation might interfere with the development of the parts, by removing portions of tissue which were susceptible of development.

Dr. B. B. Brown, of Baltimore, described a similar case, complicated by the presence of a stone in the ureter. The child died before operation.

*A Study of the Etiology of Perineal Laceration,
with a New Method for its Proper Repair.*

T. A. Emmet, M.D., of New York, after referring to the fact that he had devoted considerable attention for a number of years to the subject of perineal laceration, said that he was convinced that its effects had been much overestimated. The suffering ascribed to laceration of the perineum is not proportionate to the extent of the lesion, and some of the severest cases are entirely unaccompanied by symptoms. He directed special attention to the anatomy of the pelvic fascia, showing its attachment to the pelvic organs and to the inlet of the pelvis, and declared that these organs are held in place by this fascia, which is continued downward as a sheath for the vagina. During labor this fascia may be injured or lacerated: when this condition occurs, perineal laceration often follows in the descent of the head and shoulders of a child. Even in cases without external laceration, relaxation of the vagina occurs, and the posterior wall falls away from the anterior one. This rolling out of the mouth of the vagina, as if the drawing-string had been broken, exaggerates the appearance of laceration of the perineum, making it seem more extensive and important than it really is. The operation which he proposed had for its object the shortening of the posterior wall of the vagina, so as to restore to it its relation to the anterior wall. This object is attained by making two crescentic lines of denudation transversely across the vagina, and uniting them by a line of sutures which after the operation are hidden entirely within the vagina. The result is that the perineum is drawn up-

ward towards the pubes, and any laceration existing in it may be disregarded, or it may be united by an interrupted suture. He maintained that we might leave out of consideration, in performing the operation, everything in regard to the external organs outside the line of hymen. His object was to call special attention to the rôle which the fascia plays in supporting the pelvic organs, and to the fact that the lacerated perineum has little or nothing to do with the symptoms complained of.

Afternoon Session.

Dr. Emmet gave a résumé of his paper read at the morning session.

Dr. Reamy said the operation described seemed an admirable one for a particular class of cases, the number of which he believed to be limited. He did not regard it as a substitute for the operation for lacerated perineum.

Dr. F. P. Foster fully endorsed the statements of Dr. Emmet with regard to the function of the perineum, and denied that it had anything whatever to do with supporting the uterus under ordinary circumstances.

Dr. Sutton said that he had understood Dr. Emmet to deny the existence of the perineal body. He could not believe that he meant to say that there is no such body existing between the rectum and the vagina, which is shown in frozen sections. He believed that the uterus was supported by all the surrounding structures.

Dr. Emmet, in closing the discussion, said that he would not deny the existence of the perineum, but would deny the existence of a body anything like that which operators had attempted to build up, called the perineal body. He thought the members would understand his operation better when they had an opportunity of reading the paper.

*The Management of Accidental Puncture and
other Injuries of the Gravid Uterus as a
Complication of Laparotomy.*

C. C. Lee, M.D., of New York, called attention to this grave complication of laparotomy, and gave the details of seven cases, all he could find in medical literature, including one that had occurred in his own practice. From them he deduced the following conclusions:

First.—The pregnant womb may be punctured or otherwise wounded during laparotomy without necessarily causing abortion.

Second.—Both from a *priori* and clinical evidence miscarriage seems to depend upon injury of the uterine contents, not of the womb itself, however severe.

Third.—If the former has certainly occurred, Cæsarean section is indicated and should be promptly performed. In this case the utmost care must be subsequently taken to secure thorough drainage from the uterine cavity.

Fourth.—If the uterine walls alone are injured, the wound is to be treated on general principles. If a deep puncture or incision, it must be sutured with the minutest care, with exact coaptation of the edges. For this purpose fine silk sutures, rendered antiseptic, are the best. If a nick or superficial puncture, it must not be ligated, for ligatures cut quickly through uterine tissue; if too small to be sutured, the bleeding points must be lightly touched with the thermo-cautery until oozing has ceased. Good surgery and the dictates of humanity alike demand that under such circumstances a chance of survival be given the child as well as the mother.

DISCUSSION.

Dr. Byford, of Chicago, said that before hearing this paper he had concluded that it would always be proper when the uterus had been accidentally wounded in laparotomy to open the organ and remove its contents, but after hearing Dr. Lee's case he believed there might be exceptions to this rule, especially in the early stages of pregnancy; in the later months the traction of the muscular fibres is so great that he felt sure the stitches would tear out. In such a case he should be inclined to remove the contents of the uterus, even if the wound had not involved its whole thickness.

Remarks were also made by Dr. Wilson, of Baltimore, Dr. Garrigues, of New York, and by Dr. Lee in conclusion.

Is Extirpation of the Cancerous Uterus a Justifiable Operation?

A. Reeves Jackson, M.D., of Chicago, said that he proposed to discuss this question: In view of known facts, is it justifiable to extirpate the uterus for carcinomatous disease? Reviewing the history and the statistics of the operation, he concluded that extirpation of the uterus for cancer does not prolong but destroys life. By the abdominal operation there was a mortality of 72.5 per cent; by the vaginal operation, 28 per cent. His conclusions are as follows:

I. Diagnosis of uterine cancer cannot be made sufficiently early to insure its complete removal by extirpation of the organ.

II. When the diagnosis can be established, there is no reasonable hope of effecting a radical cure, and other methods of treatment offer far less danger than excision of the entire organ, and are equally effectual in the amelioration of suffering, in retarding the progress of the disease, and in prolonging life.

III. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering, except in those whom it kills, nor gives a reasonable hope of a cure in those who recover. Hence, as it is lacking in all the essentials of a beneficial operative procedure, it should be excluded from modern surgery.

DISCUSSION.

Dr. Van de Warker, of Syracuse, endorsed the statements just made, and described his treatment of progressive destruction and sloughing of the uterus by chloride of zinc. He had operated on eight cases, three of which had died.

Dr. Emmet approved the sentiments of the paper, and reported one unsuccessful case. If the operation is ever done, it should be by the vagina, and should be restricted to removing the uterus for sarcoma.

Dr. Baker, of Boston, opposed the conclusions of the lecturer, and said that he had operated on at least thirty cases by the vaginal method, and he could recall six cases of at least five years' standing which have absolutely recovered. The cases in which total extirpation is advisable are extremely rare, and comprise only those which begin in the fundus of the uterus.

Dr. Palmer, of Cincinnati, said that the operation in some cases is clearly unjustifiable. In others it may be justifiable. In the latter he would include only those cases of sarcoma starting in the uterine body, as it is usually impossible to determine whether the disease has already extended beyond the uterus or not. He made it a rule to decline to operate.

Dr. Sutton said that removal of the uterus by the vagina is not as fatal as ordinary ovariectomy. Schroeder's mortality was only one in thirteen. He then described the details of his vaginal operation for the removal of the uterus. The opening in the vault of the vagina is not sewed up after the operation, but a large drainage-tube is passed through the vagina into the peritoneal cavity, and the vagina packed with cotton and iodoform. This drainage-tube is not used by Martin, who simply uses the antiseptic tampon.

Dr. Jackson closed the discussion by reaffirming his conclusions.

A paper entitled *A New Method of Operating for Fistula in Ano*, by Edward W. Jenks, M.D., of Chicago, was read by title.

THIRD DAY.—Morning Session.

The first paper read was one entitled

Menstruation after Extirpation of the Ovaries,

by Henry F. Campbell, M.D., of Augusta, Georgia. Dr. Campbell said that he would not question the influence of the ovaries over the function of normal menstruation; but cases have occurred in which menstruation persisted after their removal. This return of menstruation after double ovariectomy has been attributed to habit, to plethora, and more recently to the fact that in removing the ovaries there had not been taken away the portion which is the real inciter to the menstrual nixus,—the Fallopian tubes. With-

out denying any of these propositions, he wished to advance an explanation which had not been hitherto noticed, or, at least, given its full value. On account of the prominent position occupied by the ovaries in the female genital apparatus, it might be reasonably anticipated that their removal might have some influence upon the function of menstruation,—that it might cease. We know the influence that the mammary gland exerts upon menstruation, and that mental emotions also influence this process. It is true that this is in the presence of the ovaries; but in the absence of these organs can we call into existence anything which might explain the influence of these remote inciter points upon the congestion of the uterus and menstruation? for it is possible from the influence upon the uterus of these inciters to menstruation, that even after removal of the ovaries the menstrual discharge might continue. He cited a case of a young girl seven to eight years old, in whom menstruation followed the mumps, from metastasis to the ovaries. The menstrual discharge occurred for several months, and then gradually subsided. She changed naturally at the age of fifteen. In another child menstruation appeared temporarily as a result of an abscess of the mammary gland: the menstrual nixus afterwards disappeared, to return normally at the physiological period. He could only explain these cases on the supposition of a communication through the nervous system, and for certain reasons he located in the lumbar region of the spinal cord a nervous centre controlling ovulation and periodical uterine congestion. He mentioned a case of amenorrhœa and sterility which was cured by putting a child to her breast to nurse; and another where a grandmother from putting a child to the breast began to secrete milk, and nursed the child for months. The fact that a man can feel pains in his foot and toes after amputation of the leg was cited to prove that the centre in the spinal cord may remain active even after it is cut off from the organ to which it belongs.

The object of Battey's operation is to nullify sexuality; but it does not do so entirely; it might if performed before development had taken place, but after the organs have undergone periodical congestion for years the centre is normally developed, and, accustomed to respond to the irritation of healthy or diseased ovaries, may continue its action upon the uterus even after the ovaries themselves have been removed. That is to say, through the action of the nervous centre, probably situated in the lumbar enlargement of the spinal cord, the uterus may continue its function of menstruation even after the removal of the normal inciters to menstruation, which he admitted to be the ovaries.

DISCUSSION.

Dr. William Goodell said that the return of

menstrual periods after oöphorectomy is not a common occurrence, but in the cases in which it was present this might be the probable explanation. He had noticed a sanguinolent discharge on the third or fourth day after removal of the ovaries, which he attributed to the irritation of the ligature.

He mentioned a case which had a bloody discharge coming on several months after oöphorectomy, and he found it due to sarcoma of the uterus. Where menstrual discharges regularly occur it is possible that there is a third ovary present, as suggested by Koeberle. Another explanation is that possibly some of the ovarian stroma had been left behind, as it is difficult in some cases with adhesions to separate the ovary entirely without tearing. He thought that the paper should have contained some statistics.

Dr. Emmet reported a case of double ovariectomy where he had also removed both Fallopian tubes. The patient since then has menstruated thirteen times. The only difference noticed was that her periods were not quite so long as they were previously.

Dr. Garrigues mentioned a case of a young woman who after removal of both ovaries married and had a child. Here there must have been a third ovary present.

Dr. Thomas said that Dr. Campbell's explanation might be possible in some cases; he was not prepared to deny or to accept it. With regard to the frequency of menstruation after operations, he said that he had performed double ovariectomy in fifty or sixty cases, and the impression upon his mind was this: where the ovaries are present, menstruation is the rule; where they have been removed, menstruation is the exception. After their removal the uterus may pass through some periods of congestion and metrostaxis, on the same principle as a sturgeon's heart will beat after removal from its body,—by a sort of registering action, as Professor Draper called it. He had performed both Battey's and Tait's operation, and believed the latter less likely to be followed by this spurious menstruation, since it removes more tissue. He referred to an operation in which he removed two diseased ovaries, and found a third normal, which he allowed to remain. He does not believe that the Fallopian tubes have anything to do with inciting to menstruation: he therefore had adopted the rule to remove the ovaries if they are diseased, but not to remove the Fallopian tubes unless they also are diseased.

Dr. Byford said that in giving an explanation of the persistence of menstruation after ovariectomy, very much depends upon what is called menstruation. If ovulation is menstruation, then menstruation can occur only when ovarian stroma is present; if a bloody discharge from the uterus is menstruation, it may occur, under certain circumstances, after the ovaries have been removed.

Dr. Mann mentioned disease of the uterus among causes of spurious menstruation after double ovariectomy: in one he had found cancer of the cervix.

Dr. Campbell said that he had examined bodies for forty years, and never saw a supplementary ovary, but did not deny its possibility. He said that habit does not explain anything except nervous action: the surgeon's heart beats after removal on account of its contained ganglia. He had not denied that the ovaries are the natural inciters to menstruation, but he had endeavored to pursue the subject a little deeper in order to show how they bring it about.

Remarks on Chronic Abscess of the Pelvis.

W. H. Byford, M.D., of Chicago, read a paper in which he discussed the pathology and treatment of certain forms of chronic abscess within the pelvis. He traced them from a bloody effusion, generally after confinement, the hæmatocele becoming purulent, and subsequently either discharging or being formed into a solid fibroid mass by absorption of its fluid contents. In old abscesses he had found tag-like processes depending from the interior of the cyst, which is lined by hyogenic membrane, and he advocated their removal by the curette after evacuating the cyst. With regard to method of opening, he advocated free opening into the vagina, and the use of antiseptic washes. The aspirator needle may be inserted into the abscess, and a bistoury run along it as a guide, an opening being made large enough to admit three or four fingers. He looked upon the interior of the abscess as being similar in structure to the surface of an external ulcer, as it may have healthy or flabby and fungoid granulations, and may give rise to healthy or unhealthy pus. In the course of time the granulations become converted into cicatricial tissue. He referred to several cases illustrating the principles of treatment.

DISCUSSION.

Dr. Thomas thought that the author of the paper had rendered a good service in studying the changes in the lining membrane. There is one important point about opening these abscesses. Some years ago Dr. Brittain, of New Orleans, recommended the trocar in seeking after the pus. Dr. Mundé still more recently advocated the aspirator; Dr. Lyman has recommended the same. In his own opinion, there is no more dangerous practice in gynecology than to seek for these abscesses, when they are located high up, with the trocar or aspirator: this should only be done after the diagnosis has been made by manipulation and other means. He had employed the aspirator himself in diagnosis, but not as a method of treatment, and thought it a very bad method. The opening should be a free one. In order to keep the opening

from contracting, he had a glass tube with a flange made to insert into the opening, so that he could use daily injections of carbolic acid and iodine.

He mentioned a class of cases where the pelvis seems filled with an abscess, the uterus is immovable, and the tissues are hard as a board. In these he had adopted the method of Tait in making an incision along Poupart's ligament into the abscess and cleaning it out and using frequent injections. With reference to the curette, he had had no experience with it in these cases.

Dr. Goodell was pleased with the paper and recommendations of Dr. Byford as to the curette. He preferred permanganate of potassium for the injections. He did not regard the aspirator as being so dangerous as the last speaker did: he had used it with great relief when the pus was situated high up. He had also performed Tait's operation, carrying a drainage-tube through into the vagina.

Dr. Thomas, in reply to a question about the performance of the operation in a case in a state of great prostration, said the operation was a desperate one, but the patient's case is even more desperate: it might offer the only chance of recovery.

Dr. Sutton saw Esmarch, of Kiel, scrape out abscesses in all parts of the body, and thought it the accepted treatment abroad.

Dr. Campbell said that he was not familiar with the practice of curetting abscesses, but after evacuation he sometimes packed them with linen, in order to encourage granulation. He urged the importance of constitutional measures, and particularly of the tartrate of iron. For injections he preferred Labarraque's solution.

Dr. Byford, in closing, said that he had not presented anything like a complete treatise on pelvic abscess, but had simply tried to call attention to one form, and to bring its treatment before the Society for discussion. In the cases mentioned by Dr. Thomas he had several times carried out the treatment mentioned, by carrying a drainage-tube into the vagina.

Ergot; the Use and Abuse of this Dangerous Drug.

George J. Engelmann, M.D., of St. Louis, made some remarks upon ergot, calling attention to its powerful action, and to the danger of its abuse by nurses, midwives, and the public generally. He said that he never had any real use for this drug; its action can never be relied upon with certainty. The only condition in which it might be of use is in post-partum hemorrhage, and here we have safer and more efficient remedies. He would like to see the use of ergot restricted to the non-pregnant womb. There are no circumstances in which it is necessary to give it, and few in which it is desirable to give it in this condition. It is only in the third stage of labor that the constant contraction of the uterus is

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desirable; but even here damage may be done by the use of ergot: the placenta may be incarcerated, and he would never advise its use till the uterus is emptied. Some of the dangers of its use are ruptures of the uterus, lacerations of the cervix, vagina, or perineum, besides possible injuries to the child. The worst feature of it is that the injuries produced by it are usually not noticed at the time; and the physician who gives it is generally in ignorance of the damage that is done, which is only discovered long after by the consultant, who may learn, perhaps only by accident, that ergot has been used.

DISCUSSION.

Dr. Johnson said that he had read a paper on this same subject last winter, condemning the use of ergot in parturition; but in the discussion Dr. Barker had directed attention to the fact that it might be useful in cases of threatened hemorrhage where chloroform has been given. He did not agree with the author of this paper as to the reckless use of it by the profession. He did not know that any intelligent physician would give it before the last stage of labor.

Dr. Campbell said that in 1836 or 1837 Dr. Milton Anthony, a Southern physician, had written some stringent articles upon the use of ergot in labor, limiting its use, and advising that it should never be given before full dilatation of the os, and rarely before the expulsion of the child. He said this had been his own practice: he would never give it for post-partum hemorrhage, but in order to prevent post-partum hemorrhage.

Dr. A. H. Smith thought ergot in the hands of the general practitioner an unmitigated evil. It is always calculated to do harm, and often does harm. He thought the tetanic contraction produced by ergot was unnatural and undesirable. The contractions of the uterus should be intermittent: therefore every one who gives ergot to produce expulsion of the contents of the uterus violates nature. In the early stage of labor it may produce rupture of the uterus, and in the later stage it is unnecessary. In conclusion, he denied that chloroform produces relaxation of the uterus or predisposes to post-partum hemorrhage.

Dr. Campbell said that he had never given ether in a case of labor in his life; he had always used chloroform; but he still thought it disposed a little towards the relaxation of the uterus.

Dr. Ellwood Wilson said that he had used chloroform for years in his practice, but had been obliged to give it up on account of its tendency to produce post-partum hemorrhage without any particular relaxation of the uterus. He had seen the same from the long-continued use of ether. He had been surprised to hear that ergot should be abolished. He believed that no man should approach a case of placenta prævia without ergot. In thirty-

two cases in his own practice he had used it in order to obtain the very tonic contraction which it had been claimed it exerts. He had also been surprised to hear that it had no value in post-partum hemorrhage. He considered it of immense value in post-partum hemorrhage. The difficulty usually is that ergot is given too late and in too large quantities. He said that in cases of long-delayed labor followed by hemorrhage, after its administration the patient usually called attention to a feeling of heat, at the same time the uterus contracts and the bleeding ceases. He regarded this as a very important use of ergot. A dose of half a teaspoonful of the fluid extract will produce its impression in about ten minutes, and after the expulsion of the placenta will produce tonic contraction of the uterus. He said he thought it bad practice to throw water, carbolized or non-carbolized, into the recently-delivered uterus. As regards the use of ergot after abortion, he had been thus employing it all his lifetime, and had never experienced any great difficulty in treatment except in one case which he had unfortunately tamponed. The next day she had peritonitis, and died in thirty-six hours.

Dr. Engelmann feared that he had been misunderstood. He had not meant to discuss the limits of the possible use of ergot when used in scientific medicine and in skilful hands, but to assert his belief founded on experience that it is a dangerous drug and does a great deal of mischief as commonly employed. It is a great factor in producing uterine disease. He did not think it necessary even in post-partum hemorrhage, because there are better and safer means of treatment, and these means should be more generally employed.

A paper entitled *A Theory to Explain the Relaxation of the Vagina and Perineum during Labor*, by Dr. James R. Chadwick, of Boston, was read by title, Dr. Chadwick having been called away.

The hour for adjournment having arrived, the programme was declared closed.

Dr. William Goodell offered a series of complimentary resolutions to Dr. Chadwick, the former Secretary and founder of the Society, which were unanimously adopted.

On motion, similar resolutions were adopted with regard to Dr. Mundé, who had been for several years the Treasurer of the Society.

The newly-elected President, Dr. Albert H. Smith, upon taking his seat returned thanks for the honor conferred, and, on motion, the Society was adjourned.

OFFICERS FOR THE ENSUING YEAR.

President.—Albert H. Smith, Philadelphia.

Vice-Presidents.—James R. Chadwick, Boston; Samuel C. Busey, Washington.

Secretary.—Frank P. Foster, New York.

Treasurer.—Matthew D. Mann, Buffalo.

Members of Council.—T. G. Thomas, For-

dyce Barker, New York; T. A. Reamy, Cincinnati; R. S. Sutton, Pittsburg; R. B. Maury, Memphis.

The Society then adjourned, to meet on the third Tuesday of September, 1884, in Chicago, Ill.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting held at the hall of the College of Physicians, Philadelphia, September 12, 1883, the President, Dr. Wm. M. Welch, in the chair, Dr. Chas. M. Seltzer read a paper on "Dietetics for the Sick" (see page 5).

DISCUSSION ON DIETETICS FOR THE SICK.

Dr. L. Turnbull, in opening the discussion, said: In reference to these questions my opinions are rather of the old-fashioned kind, and I believe that courses of instruction on cooking will be of much use to physicians. Dr. Benj. Rush was accustomed in his lectures to remark that "a physician should spend six months in a kitchen before entering upon his practical career." He desired to heighten the importance of a knowledge of the effects of food, and also the correct way of preparing it. All these advantages could be combined with a course on pharmacy. Physicians should learn how to make beef-tea, extract, etc., and similar articles. The important preparations of mush, of Indian and oat meal, for instance, are rarely properly made. They should be prepared over-night, so as to be thoroughly gelatinized; if made in the morning just before being served, they will not be digestible. In cases of very weak stomachs, many articles of diet may be peptonized with great benefit by using a small amount of a mixture of sodium carbonate and pancreatin, these being allowed to act for a short time at a temperature of about 80° F. Fairchild, of New York, prepares powders containing these peptonized materials in convenient amount. Such peptonized foods are like the old-fashioned preparations made with rennet and warm milk, and will be well borne by delicate stomachs. An article that is often wrongly prepared is barley. It may be softened and extracted with water, or it may be torrefied so as to make a sort of malt extract. In the latter form it is very suitable as a substitute for the diastase-like principle of the saliva in cases where that secretion is deficient. It can easily be given mixed with other food, as in puddings, for instance.

This summer we have been very successful in relieving the irritability of the stomach and bowels of both children and adults, due to temporary indigestion, by substituting first barley-water alone, and after a time a wineglassful of barley-water, with half a tumbler of milk, or its equivalent of condensed milk.

Too little attention is given to character of water. It is sometimes very bad, containing either injurious mineral or vegetable matter. The Boston water-supply was much injured lately by certain sponge forms.

Butter is an article of food which is often impure, and, besides, objectionable substitutes for it are often sold. The mixtures of animal fats known under the names of oleomargarine and butterine should not be used in the preparation of food.

Beef-tea contains often but little nourishment, and in debilitated conditions, such as most cases of typhoid fever, beef-essence, made, not from the round of beef, but from the neck, in which blood is found, will be much more nourishing. A valuable form of beef-juice can be prepared by cutting up in pieces fresh beef and placing it under a block of ice until, by the pressure, all the blood has been extracted. With the addition of a little salt it has been found to be retained by the most delicate stomach, and is very useful in cases of great exhaustion.

Dr. Albert H. Smith said: The older we get, the less disposed we are to rely on medicine and the more on diet. The remarks in the paper in reference to the importance of teaching physicians the art of cooking are deserving of full endorsement. On one point, however, I cannot agree with the author of the paper. He seemed to advocate the use of highly-stimulating food in acute diseases; in other words, the methods advocated by Dr. Thos. King Chambers in his fascinating work,—a work, however, which has done great injury. Dr. Chambers's idea was that all disease was due to depression, and therefore the remedy was to stimulate the system. This is an attractive theory, but is not true. In cases of disease attended with high temperature, we only add fuel to the flame by the use of stimulating food.

Nature has admirable powers of taking care of herself, even under a starvation regimen. The use of a low form of diet, with refrigerants and depressants, may often be of the greatest benefit. I can look back on my early experience, and recall cases in which, after operative measures, patients have been treated on the theory that plenty of pabulum should be furnished in the system, but such patients have perished. A strong patient will in such cases do much better on a low diet. Adhesive inflammation will be secured more satisfactorily on the low-diet system.

Dr. J. M. Barton: I had under my charge during three years a patient who sustained life on about a pint of milk a day,—never more than a quart a day. He was a physician, who had his own views on questions of diet and therapeutics. Dr. A. H. Smith is right in his position as to the importance of low diet after operations, but in typhoid fever we have a very different indication. In the first case—*i.e.*, after operations—food frequently acts as

an irritant, but in the low fevers the patient is exhausted and needs support.

Dr. Forbes: I am reminded of a compliment which I heard the younger Larrey pay to Orfila, the great French chemist. He said that he (Orfila) was the greatest cook that ever lived. He said Orfila understood the disintegrating power of hot water. The effect of thorough boiling is most important, and since the days of Washington it has been an article of war that beans should be boiled for six hours. In the Crimea, marked difference was seen between the French and English troops on account of the superior attainments of the French officers and surgeons in reference to many of the details of a soldier's life, and especially in cooking.

Dr. Seltzer, in closing the discussion, said: I did not wish to include in the paper a discussion of the methods of preparing food, but merely to express the idea that it is important that doctors should know what to cook and how to cook. Many articles of food that as ordinarily prepared are unfit for the sick can be cooked so as to be palatable and digestible. Mrs. Rorer's method of cooking liver is an instance of this. She exhausts it with water to remove blood, then places it on ice until required, when it is cut into thin slices and toasted: sweetbreads are somewhat similarly prepared.

As to the use of stimulating food, we must judge Dr. Chambers's views by his own method. He draws the line between acute and chronic diseases, not making time the basis of the classification, but the tendency of the disease. Acute diseases tend to recovery, and these he leaves undisturbed; chronic diseases tend to fatal results, and in these he uses a highly nutritious diet, stimulating when a depressed state exists.

In reference to the suggestions made by different speakers as to the importance of systematic instruction of physicians in the art of cookery, I may say that such courses are now being organized. I do not think that such instruction can be advantageously given with pharmaceutical teaching. A woman's taste and tact are essential to the art.

Dr. Henry Leaman then read a paper on a "Case of Amputation of the Breast, with Remarks" (see page 8).

DISCUSSION ON AMPUTATION OF BREAST.

Dr. Baldwin: I remember that the late Dr. Atlee spoke of the effects of arsenic in carcinoma and gave a number of cases in which he used it with the apparent effect of preventing the return of the tumor. I employed it in a case on which operation was performed in 1875, the patient being put on the use of Fowler's solution, continued until 1876, when the growth redeveloped and a second operation was done in 1878; no return has occurred to this time. The use of arsenic was discontinued after the second operation. During

the formation of the second growth some trouble occurred in the lung, and cancer of that organ was feared, but it disappeared after operation.

Dr. Forbes: Dr. Leaman speaks of a period of efflorescence after operation, by which I understand a general development in different organs; this, as he remarks, does not always occur after first operation. In 1864 I removed a cancer from the breast of a lady. In 1867 a hardened growth appeared in the cicatrix. It was not removed at once, as it was then giving no pain. In a short time, pain having developed, it was removed. It returned a number of times, and was each time removed until it developed in attachment to the interosseous cartilage and the muscles, and then I declined to remove it, although the patient very much urged me to do so. It continued to increase, and in eighteen months it involved the integument on the clavicle and sternum. Its condition was much aggravated by various caustic applications. Finally, some irregular parties attempted to remove parts of the diseased mass, and this was followed by an efflorescence, and a number of organs in the thorax and abdomen became involved. The patient died eighteen months after the last attempted operation.

I have heard Dr. Geo. W. Norris speak of this condition of efflorescence and its likelihood to occur in patients upon whom the cauterizing and escharotic treatment had been practised. After such treatment he advised non-interference with the knife.

Dr. J. M. Barton: I have been interested in examining the advertisements and circulars of the empirics who claim to cure cancer without operating, and I find them reporting cures of cases of over forty years' duration. Now, as scirrhus if left untreated does not usually last more than four years, it must be that these long cases are benign tumors.

Even when the knife does not cure, it may prolong life,—make it more tolerable. Operation offers us ten per cent. of recoveries. Dr. Leaman's case can be regarded as typical. The almost immediate return in the axilla is suggestive of the possibility that some affected gland had escaped removal. The removal of the entire breast in the earlier stages gives chance of total recovery, and in the later stages, with ulceration, operation is also useful; but in the intermediate periods, when the tumor is extensive and adherent to the adjacent structures, non-interference is best.

Dr. Albert H. Smith: I am glad to hear Dr. Barton advocate the repeated use of the knife; I believe in attacking the tumor every time it appears, for, at the least, life may be prolonged and made comfortable, and the patient may be spared the suffering and loathsome discharges of the advanced stages of the disease, conditions which make her a source of misery to herself and to those around her. Cancer is doubtless a local disease,

although a constitutional taint or tendency is probably inherited. Yet, if the tumor be removed early, a cure can be obtained. Dr. Leaman's patient did not do well because she did not follow the advice he gave at first. Removal of the breast should be complete; every reappearance should be met by operation. I recall the case of a patient from whom, at the first operation, no axillary glands were removed, but at the second twelve were taken out. Two more operations were subsequently performed; at the last one a very large amount of tissue was removed, but perfect union was obtained. Operation should cease when the condition is such that union by the first intention cannot be obtained. In this particular I cannot agree with Dr. Gross, who pays no attention to the size of the cicatrix or to the question of union by first intention. The patient just referred to has been well during this summer, but is not beginning to manifest infiltration, and the condition is such that primary union cannot be obtained, and I do not consider operation permissible. Under the modern advances in antiseptic surgery, operative interference in cases of cancer becomes simple and entails little suffering, and the after-treatment is not difficult.

Dr. Barton: The important point in operation is to make a complete cleaning out of the affected glands, and the obtaining of this must not be interfered with by consideration of the amount of tissue to be removed, or by the desire for primary union. Where much tissue is removed, the after-treatment is more simple than where flaps are made; no counter-openings are needed; no drainage-tubes; no pockets of pus are formed; but little, if any, fever occurs; the wound usually goes on uninterruptedly to full cicatrization. In hospital practice I rarely have to see a case after operation, from which the breast has been thus removed. I cannot recall a case in which the disease returned in the cicatrix so formed, though it often returns in the axilla. I remember a case in which three operations were performed upon secondary axillary growths in a period of four years,—the last operation being amputation of the arm, ligation of the axillary artery, and removal of the growth,—yet the resulting cicatrix from the first thorough breast-operation remained perfectly soft and healthy.

Dr. Leaman: The case I have reported is an ordinary one, and the operation was certainly performed with ordinary care. The axilla was opened, and all present agreed that no glands were affected except the one removed. The first symptoms of return were shooting pains in the fingers, referable to a nodule near the insertion of the sterno-cleido-mastoid muscle, behind the left sterno-clavicular articulation. Subsequently the axillary glands were involved. A few small nodules have since appeared over the seat of the first tumor.

I think it important to remember that surgeons may make mistakes; that some of the cases diagnosed as cancer and apparently cured by operation may be benign tumors.

In my experience arsenic has not been of use in carcinoma.

A NEW USE FOR AN OLD INSTRUMENT.

Dr. Leaman called attention to the fact that he had found the hooked end of Dr. Gross's ear- and nose-instrument the best and safest means of rupturing the membranes in labor.

A communication was also read by Dr. W. R. D. Blackwood, entitled "Remarks on the Chicago Beef Wire Skewer" (see page 9).

The Society then adjourned.

HENRY LEFFMANN, M.D.,
Secretary.

MISCELLANY.

EPIDEMIC RELIGIOUS EXCITEMENT.—The *Journal de Ploërmel* reports a curious example of one of those outbreaks of epidemic nervous disorder which were characteristic of the Middle Ages, but are now rarely heard of. Of fifty pupils of the Girls' Congregational School of Saint Marlo des Trois Fontaines, upwards of thirty-five have been attacked by a nervous disorder having all the symptoms of St. Vitus's dance. The school has been closed by order of the local authorities.

DR. WILLIAM S. JANNEY has been elected Professor of Practical Anatomy and Clinical Surgery in the Medico-Chirurgical College of Philadelphia.

AMERICAN ACADEMY OF MEDICINE.—The annual meeting of the Academy will be held at the New York Academy of Medicine October 9 and 10.

OFFICIAL LIST

OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM SEPTEMBER 22 TO SEPTEMBER 29, 1883.

- P. A. Surgeon J. H. BRYAN detached from the U.S. steam-ship "Miantonomoh," and ordered to the Museum of Hygiene, Washington, D.C.
- P. A. Surgeon A. F. MAGRUDER detached from duty at Villefranche, France, and granted six months' leave, with permission to remain abroad during that period.
- P. A. Surgeon C. H. H. HALL to be detached from the U.S. steam-ship "Ranger" on reporting of his relief, and await orders.
- Surgeon J. L. NEILSON detached from the receiving-ship "Franklin," at Norfolk, Virginia, and ordered to the U.S. steam-ship "Ranger."
- Surgeon WILLIAM A. COUVIN ordered to the receiving-ship "Franklin," Norfolk, Virginia.
- P. A. Surgeon ROBERT WHITING detached from the receiving-ship "Wabash," at Boston, and ordered to the Naval Hospital, Norfolk, Virginia.
- Surgeon G. S. BEARDSLEY granted leave of absence for six months, with permission to leave the United States.
- P. A. Surgeon A. A. AUSTIN, orders to Naval Hospital, New York, revoked, and placed on waiting-orders.
- P. A. Surgeon GEORGE C. LIPPINCOTT ordered to the Naval Hospital, New York.
- Medical-Director GEORGE PECK detached from the Naval Hospital, Mare Island, California, and placed on waiting-orders.
- Surgeon D. McMURTRIE and P. A. Surgeon M. H. CRAWFORD ordered to report at Washington, D.C., October 3, for medical survey.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, OCTOBER 20, 1883.

ORIGINAL LECTURES.

GENERAL INTRODUCTORY LECTURE

Delivered at the Opening of the One-Hundred-and-Eighteenth Course of Lectures in the Medical Department of the University of Pennsylvania, October 1, 1883,

BY ALFRED STILLÉ, M.D., LL.D.,

Professor of Theory and Practice of Medicine.

GENTLEMEN,—The motto on the seal of the University—" *Literæ sine moribus vana*"—was no doubt intended to teach that learning is vain without morality; but the word *mores* really means manners, and the phrase signifies that one's manner of thinking and of acting towards other men not only stamps the moral character of the man, but also gives to his literary and scientific attainments their just value.

The word "*mores*," then, in our motto embraces the whole of a man's life, his manners, as well as his morals, and, above all, it sets up as the standard of conduct that which has been established by custom,—for such is the meaning of *mores* in the singular number. In the history of the world custom has the force of law. Many things that are immoral in one country or at one period are held to be moral and even praiseworthy at another epoch or by a different nation. A long-established custom may generally be regarded as having a real ground for its existence, and ought not to be laid aside without an equally substantial reason.

These thoughts have been suggested by published statements that certain medical colleges proposed to dispense with introductory lectures. Pardon me if I say that they struck me very much as a resolution would for gentlemen to dispense with the customary salutations which, in one form or another, are common to barbarous and civilized nations, and whose omission is everywhere regarded as insulting.

In every European country the annual opening of the medical schools is and has been from their very foundation celebrated as a festival, and a formal discourse is pronounced by a member of the Faculty upon some topic more or less directly related to medicine. A century and a half ago, themes such as these were chosen for the

introductory lecture of the School of Paris: "The Search after Truth in Medicine;" "The Obligations of a Christian Physician to Religion and his Country;" "The Maintenance of Harmony between Physicians and Surgeons."* To this day there is not a medical school in Europe where the same ceremonious inauguration of the year's duties is not observed in a similar manner. The University of Pennsylvania inherited it from the schools of Leyden and Edinburgh, and has transmitted it to the younger generation of medical colleges in this country. Formerly each professor delivered a lecture introductory to his own course, and the whole of the first week of the term was consumed by these lectures alone. More than twenty years ago the present plan of giving a single and general introductory lecture was adopted, and under it, as the representative of the Medical Faculty, I formally introduce you and my colleagues to one another, and hope that an acquaintance so cordially begun may ripen into a friendship that shall never die. Persons so introduced, even for business purposes, if they are well-bred, or even if they understand anything of human nature, will abstain from plunging at once into the special matters that concern them: they will spend a little time in trying to learn something of each other's disposition, motives, and objects, by conversation upon general subjects. I therefore follow the precedent set by many generations of professors, and ask your attention to certain topics which are more or less related to medicine, and about which you will, perhaps, not be displeased to hear an expression of opinion. It has been said that introductory addresses are not always to edification; that the speaker is under bonds to magnify his colleagues and the institution he represents. I shall not so far overstep the bounds of modesty. The Medical Department of the University needs no blare of trumpets to celebrate the yearly opening of its doors. But the occasion is one when it may be profitable to consider some of the claims of medicine to our reverence and duty, or rather to the duty of active service because of the reverence which is her due.

Devotion to medicine may be exhibited by fostering whatever tends to perfect a

* Corlieu, *L'ancienne Faculté de Médecine*, p. 131.

knowledge of it, or, in other words, by promoting the most perfect methods of education and practice. The education itself cannot be secured by the wisdom of its plan alone, nor merely by wise enactments of either state or college. Like everything else that has its roots in nature, the development of knowledge needs time for growth, as well as a proper soil and the fostering influences of sunshine and rain. It is well to remember that the bulky and succulent animals whose flesh now enables man to endure the severest toil were once small in size, and of tough fibre; that the swift, docile, and intelligent horse of Arabia or England is a very different creature from the coarse and wild animal from which it is derived; that the grains upon which mankind depend for daily bread were little more, originally, than weeds; that the fruits most renowned for size, aroma, and flavor were once insignificant, and crude, and harsh; that all the glories of modern horticulture have been developed by the patient art of man out of plants as simple and vulgar as the weeds that skirt a country road or thrive in the forest solitudes. And, more than this, we should remember that that still finer product, the flower of intellect, can only be developed by the most intelligent application of means that have been tested by the experience of ages. There is neither a royal road nor a popular by-path to knowledge. Knowledge is the food of the mind, and it must be subjected to processes like those by which material food nourishes the body. All material growth is the outcome of food digested and assimilated; and as strength is a result of growth, so wisdom is to be gained only by appropriating the lessons of nature and the experience of mankind, making them verily bone of our bone and flesh of our flesh by feeding the mind with the products of infinite wisdom and human intelligence, until we grow into the most perfect type of humanity and likeness to the Divine.

Physical differs from intellectual development in that it is limited by physical laws; but no limit has been discovered to the expansive powers of the mind. Yet high as its attainments have been, and higher far as they may be hereafter, there is but one way of securing them, and that is by gradual progress; literally step by step, and with constant watchfulness that each

step shall be a real advance upon ground so solid that it may be safely used to advance towards that ideal state in which every man can secure the knowledge required by his chosen career.

On something like this ideal plan the education of Europe has long since been framed, not, as here, by the chance association of well-intentioned individuals, but as one of the proper functions of the government; and hence in its most cultivated nations professional studies cannot be taken up at will by the ignorant and untrained. On the contrary, the youth almost from his cradle undergoes a systematic and progressive training in school, gymnasium, and university, and acquires, little by little, that discipline of his faculties, and that aptitude for gaining knowledge, which render his higher professional studies natural, easy, and profitable. Towards such a consummation as this the best systems of instruction in this country are tending, training the mind and the character for the various paths of usefulness, honor, and profit in life. We are gradually getting rid of the barbarous notion that each man is as fit as his neighbor for whatever vocation he may choose, and as gradually becoming convinced that for each professional career no amount of preparation can be too great, and that the only training which really insures legitimate success is one that begins in childhood and is steadily pursued and expanded over a constantly widening field until it reaches the level of professional education. It is perhaps true that no such systematic education can yet be generally exacted, but it is doubtless equally true that there is a large class, which is rapidly growing larger, of persons who, for themselves and their children, are determined that the means of acquiring the most perfect education shall not hereafter be lacking, and that, let others do as they will, let others sneer as they may at science, scholarship, and discipline, as for themselves they will serve no other cause than that of acquiring and imparting the knowledge on whose possession the rank of our country in the civilized world depends.

It may be difficult not to complain of the slow development of medical education in this country, but we should not be impatient, nor, least of all, discouraged. We should not forget that in every onward movement of civilization time is an es-

sential element. It is easy, on a superficial view of our medical history, to blame the apathy of the profession, but, on a deeper investigation, it is quite as easy to discern the causes of our slow progress, and the tardy and imperfect results of the well-meant and zealous efforts that have been made to improve our methods of professional instruction. Not now for the first time does the question of a higher medical education occupy the attention of American physicians. It is not by the movement in advance of Harvard or of our own University that the new departure began; it was not with the establishment, in 1847, of the American Medical Association for the sole purpose of promoting this object, that the agitation commenced. Long before that period the prophets made the land resound with lamentations over the ignorance of physicians, and held up side by side the short and meagre curriculum of our education and the prolonged and elaborate instruction of European physicians. Here and there among us were men who hung their heads and blushed for shame, and here and there some spurred forward to do battle for the truth, but, too often finding that their weapons fell upon stolid mountains of ignorance or on the stony walls of prejudice, they retreated discomfited and discouraged. The fulness of time had not yet come, nor has it come even now. The day is breaking, but noon is still far off. A century, almost, has passed, and we are yet only struggling into the light. We take pride in the unexampled growth of our country in population, wealth, and industry, in the mechanical arts, and in whatever ministers to the physical well-being of the nation, but whoever looks critically at our condition must admit that a corresponding progress has not been made in moral and mental culture. In the natural order of human progress the material must be developed before the intellectual, but the more closely we consider the history and actual state of the question the plainer does it become that our material prosperity has advanced in a disproportionately rapid manner, that whatever is supposed to lead to wealth is fostered by legislation, and that whatever has only intellectual claims is very apt to be ignored, if not contemptuously treated, by our legislators.

The ancient examples of the first colonists of Massachusetts and Virginia are apparently unheeded. It seems to be for-

gotten that these two colonies, the one among the smallest, the other one of the largest, took the lead in all the affairs of the nation by sheer force of superior cultivation, and that to this day one of those States holds a similar pre-eminence and owes it to the same cause. These and similar examples seem to be overlooked by, or are unknown to, those whom we elect to make our laws, and our legislatures spend their time in regulating trade, and manufactures, and agriculture, and other material interests, when they are not engaged in wrangling over the plunder of the public purse. The things that make a nation really great, the laws that compel as well as encourage the people to understand that life has higher aims than riches, better rewards than silver and gold, are either neglected or are enacted and administered without intelligence. Above all, and worse than all, the examples I have drawn from colonial times are unheeded, even if they are thought of, which they probably are not. Our ancestors, paraphrasing the ancient fable, concluded that although the several members are necessary to make up the whole body, and no one of them can continue to exist without the others, nevertheless the brain is king over all. And hence, while they provided for instructing all children in the rudiments of knowledge, they took care that those who were destined to a professional or scholarly or scientific career should have access to the best instruction that the time and the country afforded. These principles, be it observed, and these provisions were those of our English ancestry, of monarchists and not republicans, and, in the case of Virginia, of aristocrats and not democrats. Perhaps for that very reason when the colonies were fused into a nation it came to pass that whatever interest was displayed in legislating for education generally exhausted itself in trying to improve the primary and secondary schools, while higher knowledge and professional education were left to struggle for existence as best they could. Even worse than that: broods of colleges pullulated all over the country, many of which were not even respectable grammar-schools, and medical colleges were established in villages whose very atmosphere was fatal to science, and with professors whose ambition, however great, was not sufficient to excuse their ignorance, and who, never having had any

trained clinical education themselves, may perhaps be pardoned for believing that physicians can be made of young men who have never studied disease at the bedside under trained instructors. While the very fountain of supply of the medical profession was thus yearly becoming more impure, and graduates were multiplying who instinctively defended their own ignorance and the system that produced it, the better-instructed physicians of the country never ceased to protest against this evil and to propound measures for its cure. It was not clearly seen that to impose a more thorough system of education on nine-tenths of the medical schools was like bidding the cripple to "arise, take up his bed, and walk." How could they be expected to have the faith that works miracles? They, too, had regard for the "loaves and fishes," and so they have, for the most part, continued to crawl in the old and beaten path, and let who would outstrip them. Unfortunately, they not only use the path, but they cumber and obstruct it; they lie, as it were, across it, and hinder the advance of others who are more vigorous in action and of larger views than themselves. In plain terms, these obstructive schools, whether in villages or in populous cities, seduce to themselves young men who would otherwise have sought their education in colleges of a higher grade, and thus by one and the same act hinder the good work of their rivals and retard the professional advancement of the young men whom they graduate. It is probably safe to predict that so long as free trade in medical education is unchecked the most meritorious colleges will fail to attract to themselves the greater number of students, and the hope of educational progress, which has aroused the enthusiasm of not a few in each generation that has passed, will still remain an unfilled dream.

Is there no hope, then, except in the colleges that prefer character to emolument, and who have taken upon themselves the dangerous duty of leading the forlorn hope in its attack upon the strongholds of ignorance and selfishness? Is there no prospect, under our political system, of there being a restoration of those methods which were never before separated until they were torn asunder violently in our own age and country? Have knowledge and culture any essential antagonism

to freedom and political equality? Is there any necessary incompatibility between being at the same time a gentleman and a good citizen, a scholar and an honest man? Are we so far below the standard of the ancient republics that, unlike them, we can afford to despise knowledge and to foster ignorance?

To these and similar questions no one, I presume, will venture to give an answer that implies a confession of national or professional decline; and yet no one, I imagine, will be so bold as to assert that during this century and more of our national independence we have as a profession kept pace with the professional advancement in other countries, or even with the progress of those who cultivate other branches of natural science in our own country. Compared with American naturalists and scientists generally, the American physician does not shine. The written medical publications of the country, as a whole, and with some brilliant exceptions, are remarkable for superficiality, inexactness, partiality of survey, lack of largeness and firmness of grasp; and these defects are painfully conspicuous in our periodical literature. True, very true, several cities could be mentioned where the narrower provincial traits have become partially effaced; but it is because in them many of the leading medical men have served a second apprenticeship in foreign schools, and therefore shine by contrast with the background they illuminate. After all, it happens that the sonorous resolutions passed by our local, State, and National medical associations, the addresses of teachers, the essays in journals, and even the general *consensus* of the cultivated medical men in the profession, have not produced, except at two or three points, any material enlargement of the sphere of education. It would seem as if there was something both rationally and morally wrong in our judgment, when we see systems that have been wellnigh laughed out of existence on the other side of the ocean accepted and widely propagated here, and coquetted with by some of the most conspicuous members of the profession. Even worse than this, the pillars of professional dignity have been shaken, the bonds of professional morality have been loosened, and an effort made to abrogate the ethical law which has heretofore governed the profession, or to

substitute for it another expressly contrived to pander to acts that have hitherto been held as criminal. Our unlimited freedom has tended to loosen the bonds of professional brotherhood: once being assured that every man may become a law unto himself, professional disintegration will be hurried forward with the rapidity of geometrical progression. In a word, it has become only too plain that life without a head, however compatible it may be with zoophytic existence, is not so for the higher organizations to which our profession belongs. It is immortal, and can only "by annihilation die;" but whether its life shall be vigorous, productive, beneficent, and honorable, or feeble, barren, hurtful, and degraded, the events perhaps of this very generation may determine. I have no pretension to reconcile the incompatibilities of the subject and bring the politics of the day into harmony with the serious interests of science. A more monstrous conjunction would be difficult to conceive. Nevertheless, it seems to me that possibly by creating, first a thoroughly-educated medical profession, and then a delegated representative body from within it whose enactments should have the force of law, a legal tribunal might be established in each State, an *imperium in imperio*, which should have the absolute control of all things medical within the commonwealth. Is this a practicable plan, or is it only a chimera,—a nightmare engendered by the impossibility of digesting the manifold crudities of the existing state of affairs?

It must not be supposed, however, that any method of improvement, however wise in itself or well considered, can at once be made acceptable to those for whose benefit it was designed.

It is related of an eminent statesman that at the very entrance of his official career he was confronted by the stubbornness of the routinists and by the amazement of the ignorant. They were equally persuaded that nothing was possible beyond what their own narrow field of vision had made familiar to them, and he wasted his strength upon these obstacles as waves dash in vain against the cliffs. Just such a fate is too often reserved for men and for institutions who are better informed than their rivals, and who, animated by a nobler spirit of progress, are ambitious of having their work more perfect than they received

it; who endeavor to substitute fresher materials and more productive measures for those which have become effete or obsolete, and to breathe into a torpid body the vigor and animation of renewed youth. In literature, and even in science and art, the greater number are persuaded that their own particular coterie or school, the attainments of their own generation, the methods pursued in their native town or country, represent the *ne plus ultra* of advancement, and they are apt to resent as a personal affront every attempt to improve them. They too often forget that they stand upon a higher plane than their predecessors, and that the next generation will stand upon a superior level as certainly as that the sun at noon is higher above the horizon than at the dawn of day. Few things are recognized by men with more reluctance and difficulty than that they are not the centre of the universe; that in fact they are seldom anything at all unless they transmit to those who come after them the light they have received from their predecessors. It is not the physical characteristics, nor the moral qualities, nor the material wealth, alone, of one generation that descends by inheritance; quite as certainly the genius, the skill, the harvest of knowledge of successive generations and of individuals, are so transmitted. Well, then, may we cry shame upon those who stint posterity of its rights by a negligent or even by an unintelligent culture of their field of labor, or, worst of all, who dwarf the mental growth of those they educate by repressing criticism, by discouraging inquiry, and by the administration of that potent carminative, flattery, soothing even the restless minds of the young into a sweet contentment with ignorance and stagnation.

For more than half a century, as I have already said, there have never been wanting some who rebelled against the tyranny of educational routine, and who labored, for the most part in vain, to have their views accepted. How strange it seems that a country which prides itself upon its progressiveness, and justly so in material things, should be so far behind others in the highest departments of general and professional education,—a country, too, whose people, by the intermarriage of races, by political and social liberty, by abundance of food, by varied indus-

tries, and by experience of the vicissitudes of life, are the most actively intelligent of all the nations of the world,—how strange, I say, it is that they should still lag behind in the nobler fields of knowledge, and that those who have gathered the fullest harvests therein should find so few to understand or value them! Nevertheless, it cannot be doubted that this small number is increasing every year; that the voice which so long has been crying in the wilderness is at last echoed here and there by kindred spirits; that the long-buried seed is springing up to gladden the barren places of ignorance; and that the intellectual development of the nation will in the near future rival its material prosperity. While we are diligent in promoting whatever may quicken the advancement of medicine in its teaching, its science, and its practice, let us not be impatient. Let us remember the sublime image of the prophet that the Almighty was not in the whirlwind, but in the “still, small voice.” All beneficent advancement in the social, moral, intellectual, or political condition of mankind has been the outcome of slow and gradual changes which were often hardly perceptible, or at least did not attract general attention. The infant of one period becomes the adult of another by such silent development that the successive changes can only be measured by a comparison of widely-separated epochs.

What has been said of professional and national development is no less true of every individual's education for active life. The knowledge implanted during the long seed-time of childhood and youth, and even in the maturer period of early manhood, is slow in bringing forth its fruit; nor is it all grain fit to furnish the bread of intellectual and moral life. It obeys the law of universal nature that all fruit shall be small in comparison with the plant that produces it; the law that encloses the life of the great oak in the tiny acorn. Look at the sheaf of wheat before and after it has been threshed, and observe how little it has lost of its bulk; yet all that was valuable in it has been removed, and what remains is fit only to be trodden under foot of cattle. It is no less true of knowledge that its seeds germinate in darkness and often in unclean soils; that although it waxes larger and stronger, it may for a time give no promise of fruit; that even when its fruit is

matured it must still be winnowed from the tares of error; and that the residue of all this waiting and watching and culture is a very small bulk indeed compared with all that must be thrown away as valueless. But then this residue is the quintessence of knowledge, and contains within itself the vital principle out of which spring new truths to cover the fields of science with harvests to the very end of time. Let us not then expect or attempt to contravene the laws of nature, nor suppose that a harvest can follow immediately upon the seed-time of learning, whether it be of individuals or of institutions. The qualities of the young are adapted to them,—their faith, hope, enthusiasm, energy, and diligence; but they may lead to no immediate result. They are fair blossoms, but the fruit is in the future. Not that it will reach maturity as a matter of course; not without protection from frosts that kill and droughts that wither, and, above all, not without that innate vitality which all through the period of development gives the surest indication of the ultimate perfection of the fruit.

Moreover, the attainment of success is seldom like the growth of grain in well-tilled fields, where everything is propitious to its perfect development. It involves a perpetual conflict with antagonists and surmounting of obstacles. A traveller has told us of a mountain-side sprinkled with blocks of granite, so that most of the trees are obliged to twine their roots over the rocks or split them asunder in order to reach a little earth to nourish them, and yet they force their way upwards to a surprising height, and seem to grow into one with the rocks, so that they stand more securely than their easy-going comrades who are rooted in the tame forest-soil of the level country. So it is in life with men who have become great because they have strengthened and established themselves by subduing the obstacles that oppressed their growth.*

In this conflict the direction of the result is determined by the accidental relation between the active and passive forces engaged. But in every man there is a power to rough-hew the end, although the Divinity may give it its final shape. The forces that determine a man's career may be likened to those which propel and guide

* Heine, Pictures of Travel.

a steamer. The engine turns the wheels constantly in the same manner, moving the vessel onward, from whatever quarter the wind may blow or however the current may run. It is the pilot at the wheel that shapes its course in this or that direction, towards this or that haven. So the impulsion of genius must be directed by the guiding power of reason and judgment. The impulse may become dangerous without the controlling quality, and the judgment that directs would be in vain without the impelling force. All the great masters of knowledge of mankind have recognized this double influence that determines our career in life, our own will and the power of circumstances, and have shown how far it is possible apparently to bend events to favor us. I have already alluded to one expression of it. Here is another:

"Men at some time are masters of their fates:
The fault, dear Brutus, is not in our stars,
But in ourselves, that we are underlings."
Julius Caesar, Act 1, Scene 2.

But I cannot pause to develop these ideas belonging to a subject which concerns us very deeply, because it relates to our conduct and success in professional life. Out of the many others that present themselves is one that by long habit, if not by natural instinct, attracts me more than others, for it seems to me that upon a right judgment in relation to it depend a physician's genuine success and reputation. I say *physician*, and not medical scientist: the man whose business in life is to cure diseases, and not the one who occupies himself with speculations or experiments regarding their nature or the physiological action of medicines. What Emerson* said of art in general is quite as applicable to the art of medicine. "Man is but 'naturæ minister et interpres.' As long as he watches for the signs she holds out for his guidance, his road will assuredly lead him towards the truth; but as often as he busies himself in finding out inventions which are evolved from his own consciousness, he wanders from the straight path and will inevitably be lost in the desert of doubt or in the quagmires of error." This is the philosophy of Bacon, by which all modern science is justified. On the other hand, may be found in a leading medical journal of Europe the following: "A medicine or a therapeutical method should not be em-

ployed merely because its successful applications are numerous enough to inspire confidence in its power. What is necessary above everything else is that the physician should *understand the precise nature* of the treatment he employs, the precise line of conduct he should pursue for each disease; not the more or less complete statistics of empirical results, but a clear and distinct explanation of the therapeutical effects, based on experimental physiology and clinical observation."† Blind leaders of the blind are such teachers as this one, who, seeing but half the truth, and that a subordinate and non-essential part, exalt it into the supreme, if not exclusive, power. As teachers, they train up pupils who, unless they resolutely tear away the errors that blindfold them, will find themselves discredited by the wisest men of their own generation, and out of harmony with the empirical art which has survived and governed from Hippocrates until now. During all these ages, the medical hypotheses and systems that have flashed a momentary glare upon the world have, like the utterly useless fireworks they resembled, gone out in stench and darkness. If there is one idea more absurd than another in regard to practical medicine, it is that the efficiency of treatment depends upon its being intelligible, or, conversely, that the physiological action of a drug bears any uniform relation to its therapeutical action. Are we so blind as not to see, so dull as not to apprehend, or so wrong-headed as not to acknowledge that in the list of medicines that has lengthened out from the beginning until now, and will hereafter stretch to the very crack of doom, there is not one, no, not a single one, whose virtues were discovered by science and not by empirical observation? Philosophers no more discovered medicines than they invented food. The instinct that taught man to eat also taught him to seek in the natural objects around him, and in the fruits of his own invention, the means of relieving pain and curing disease. As an art, medicine is next in antiquity to that by which men learned to distinguish wholesome from noxious food, to produce fire, to find shelter from the destroying elements, and defence against wild beasts and hostile men. When man began to suffer from wounds and bruises, the same

* Society and Solitude, p. 36.

† Lambert, Bull. de Thérapeutique, lxxix. 5.

instinct impelled him to seek and led him to find remedies for them, and to hand down his knowledge to his children and his children's children. As the river that bears great fleets upon its bosom may be traced through many a winding with constantly narrowing stream until its source is discovered in some tiny rill far away in the recesses of the mountains, so all human knowledge, so, above all others, medicine and its twin-sister religion, had their birth in that remote and mysterious primeval region which the faith of all nations has pronounced divine. Who taught man medicine? Who taught man worship? To these questions only one answer can possibly be given,—the power that created him and that made him what he is. And let it not be forgotten that he shares the medical instinct with the brutes, and that even they have always been his guides, and were perhaps his first teachers. If any one finds in this an ignoble origin of the art of medicine, let him consider whether religion is degraded by springing from the terrors of nature on the one hand and her beauty and goodness on the other. Let him also ask himself whether the grandeur of the oak or the charm of the rose is lessened because its roots are embedded in dirt and decay. It is the shame of the arts and sciences, as it is of many men, that they try to ignore or to conceal their humble origin, although nothing but imbecility should prevent their remembering that a few generations ago, more or less, they too were sons of the soil.

Yes, there are some who seem to believe that medicine sprang full-grown from the brain of Minerva, as the goddess herself was fabled to have sprung from the brain of Jupiter. They ignore everything before Galen or Hippocrates, when they ought to know that even the greater of these, the father of medicine himself, invented far less than he compiled, and that his works, as they have come down to us, represent not so much his own genius as the growth reached by medical knowledge in his day. The scientific physicians of the present generation too often remind one of the iconoclasts of the English commonwealth and the atheists of France. They found it easy to destroy, but to supply the place of what they destroyed was beyond their skill. By infusing into the popular mind a portion of their own self-sufficiency they have helped on the baleful work of the Nihilists,

whose creed is a negation and whose aim is destruction, so that now on whichever side we look are heard only the scoffs of these self-enlightened people at everything on which the soul's faith and the understanding have securely rested from the beginning. They sneer at virtue as a mere matter of temperament, a constitutional state that has no more to do with conscience or responsibility than one's sex or the color of the skin. They would dethrone the Lord of heaven and earth; but while they laugh at religious faith they worship the little idol they have evolved out of their own consciousness, and whose proper name is vanity. They deride the wisdom of ages, and would create anew the science and art of medicine, not considering that there must come after them a generation that will treat their doctrines with the contempt that they themselves pour upon those of their predecessors; not even conscious that all their lives they have been sapping the faith of the people in that which, next to religion, they have always venerated, and rendering physicians themselves sceptics, if not scorners of the art by which they live.

Yes, for this and for much more evil are the overweening pretensions of misplaced medical science answerable. They are responsible in a great measure, also, for the wave of quackery under which the medical profession is in danger of being submerged. For the people instinctively argue, "If physicians no longer have faith in medicine, why should we have faith in them?" and therefore they wander off into the abominations of quackery, be it gross and vulgar or take the shape of ethereal quintessences, simply because the prophets of these false systems are wiser in their day than the children of light, and "wear the livery of heaven to serve the devil in," and are, above all things, self-confident and incapable of shame. The so-called intellectual regions of our country are precisely those in which these miserable frauds prevail and thrive most vigorously, where physicians are most prone to proclaim the nonentity of their art, where human rights are held to be superior to human duties, where the brain, the intelligence, is so strained by education and by the habits of life that it oftener than elsewhere is shattered or withered, while the heart, the moral nature, becomes chilled, and dwarfed, and shrunk, and the moral aspects of life,

the sentiments of reverence, of gratitude, of pity, sympathy, and love, are felt to be encumbrances in the struggle for wealth and distinction, and are not allowed either to sanctify research or to consecrate its fruits. No, gentlemen, no! "What God has joined together let no man put asunder." Science and art are portions of one complete whole. But while natural science cannot exist without art, not only can art exist without science, but it always did exist before science was dreamed of. Medical art changes but little, except as a tree is changed in growing, but medical science is a creation; the science of to-day is very different from that of yesterday, and we may be very sure will be found quite unlike the science of to-morrow. The history of medicine may be pictured as two streams whose general direction is parallel, and whose waters, if for a time they mingle, on the whole pursue an independent course. Theory is sometimes a stream rushing over a stony bed between rocky and treeless shores, tumultuous, winding, shallow; sometimes like one of those rivers of our West, issuing in great volume from the mountains, but dwindling as it goes, until it disappears in the barren desert. But art, be it medical or any other art, is a broad and, it may be, almost a sluggish stream that creeps or sweeps onward between banks that widen as it goes, fertilizing them in every portion of its course, filling granaries with corn and storehouses with wine and oil, and planting marts of civilization on its shores. Art it is that has given us all the resources of medicine, which, if we use them aright, will bring honor to it and profit as well as honor to ourselves; but if we slight it, if we deride it, if we proclaim our disbelief in it even while teaching or practising it, we bring discredit upon what it is our misfortune not to have comprehended, and set an example of faithlessness which we may be sure that the unlearned in medicine will use to justify their own apostasy.

At the risk of exhausting your patience, I venture upon one more reflection suggested by the previous remarks. I wish to remind you that medicine, although it has existed from at least the time of Hippocrates, twenty-three centuries ago, had not, and could not have, during more than two thousand years of that period, any foundation such as we now call scientific, for until about two hundred and

fifty years ago the circulation of the blood was unknown. Later still came the discoveries that, along with the circulation, constitute the basis of modern medical science. Then, and only then, for the first time was it learned that the animal organism is developed and sustained by the conversion of food into flesh and blood on the one hand, and the supply of air on the other hand; still later than this it became known how all the vital movements of the organism as a whole, and all the mutual relations of the different organs, are maintained by the mysterious power of the nervous system; and finally it was learned how the body is doomed to death by the inevitable decay of the mechanism upon which the maintenance of life depends.

I say that all this science of medicine, and infinitely more connected with it, is a creation of but yesterday compared with the venerable antiquity of medicine as an art. It is evidently, therefore, independent of the art, as the art is independent of the science; and whether the science be true or false, and in whatever degree true or false, it has no more essential connection with the art of healing than the theory of the tides has to do with the actual flux and reflux of the ocean that surrounds the earth. It is of importance to us all, and at every stage of our medical career, but of the utmost importance to those who are just entering upon the study of medicine, to keep clearly before them that medicine has two sides as distinct from each other as all facts are distinct from the explanation of those facts; that while the one is essential, and if true is everlastingly true, the other is but of yesterday, is always vacillating, and can never be absolute, and that however much it may assist the mind to group together medical facts and refer them to general laws, it can never be more than a provisional formula. In the sphere of actual practice all hypotheses, theories, principles, must be subordinated to empirical rules, for they are founded upon the observation of disease and not upon the conclusions of scientific theories, and are as true in this nineteenth century as they were two thousand years ago, before the circulation of the blood was dreamed of, or a single organ of the body was accurately known in its structure or its function. The aim of science is to explain what art discovers; but the discovery

remains, whether the explanation be true or false. By all means let us use the principles of science in studying disease and its treatment, but use them as threads to guide us in the labyrinth of research, as scaffolding to aid us in building the solid walls of concrete facts, so that when we have reached our goal we may cast away the thread; when we have raised the temple we may throw down the scaffolding that is no longer useful.*

* The remarks in the text are in harmony with what appears to me to be the true and legitimate spirit of medicine as it is displayed in the writings of all ancient and modern physicians who have really enabled us to improve the cure of diseases. They represent the spirit of the English and French schools of medicine as opposed to the German and Italian schools, the clinical as contrasted with the speculative methods of studying and treating diseases. In each of these national schools there are exceptions to the rule which governs them; but as a whole the former are practical, the latter are theoretical. In the United States, where a large proportion of the best teachers have been trained in European schools, and especially in those of Germany, and where many of the leading physicians are born and educated Germans, it is not to be wondered that the peculiar medical doctrines and methods of that country should have been imported here and engrafted on our medical body. That these doctrines and methods are discordant with the essentially practical genius of Americans, and must sooner or later lose their influence, appears to me certain. But, in the mean time, it behooves all who have an opportunity of addressing medical students to warn them against the barren and injurious methods of thinking and practising which are tending to destroy our faith in medical art, and which have already carried tens of thousands of patients away from true medicine into the absurdest and most mischievous systems of quackery.

The absurdity and danger of "scientific" medicine in practice have been a thousand times exposed in ancient and modern times, but I venture to place on record here one or two utterances respecting it which most accurately express my own convictions. Some fourteen years ago, Dr. Elam, in London, wrote as follows:

"Medicine should be, before all things, the *art of healing*. Our first and fundamental error in theory has been the overlooking of this definition, and viewing medicine as a science. Now, in any proper acceptance of words, medicine is not, and can never be, a science; it is an art *sui generis*,—fed, fortified, and enlightened by science,—but in no wise a science in itself. This is not a mere speculative matter,—an affair of terminology. So long as we view medicine as a science, so long shall we be disappointed in our progress and our results. Science is steady, certain, and progressive; art is vacillating, doubtful, and limited. If we expect exactitude and certainty in medicine because we rank it as a science, we shall be ever failing, ever doubting, and losing our faith, and, as a necessary consequence, our zeal. We can never hope to reduce medicine to mathematical formulas in which disease and remedy will represent one side of the equation, and health the other. We deal with such an infinite variety of unknown quantities and indefinite variables that we can never hope to reduce them to any fixed expression that can have a practical value. Besides disease, we have to deal in each case with age, sex, temperament, and previous history,—elements which can to some extent be allowed for; we have also to deal with idiosyncrasy, with heritage, and with the thousand social surroundings which will always baffle our calculations and stultify our foregone conclusions. . . .

"Science is knowledge, but such knowledge is not power in any practical sense. . . . By science we know disease; science is diagnostic. It is by art that we treat it; art is therapeutic. All our art is derived from experience. . . . Science knows, and is precise and positive, art is variable and selects. Science submits to no ignorance, but art is ignorant of much. Science is essentially contemplative, art is active. . . . 'Science puffeth up, art buildeth up.' . . . Pure science has, in general, done but little for art, while art has constantly and largely been contributing to the progress of science. . . . Medicine has the same relation to science that poetry or painting has; and inasmuch as the most complete knowledge of the laws of perspective and the theory of light and colors would fail to make a painter, or the most intimate acquaintance with the rules of versification would

But I must hasten to conclude this address, made fragmentary by the very pressure of the topics that clamored for a hearing, and in doing so beg you to look beyond your present studies and keep your eyes fixed upon some elevated goal that you intend to reach. We are often bidden to take short views of life, to take no care for the morrow, to bide our time, and the like, precepts that may have their application, but it is not for you. On the contrary, what your studies are, and the spirit in which they are pursued, such in all probability will be your future attainments and prosperity. It is only the weak and narrow-minded man who bounds his horizon by his daily work. The strong man is the hopeful man who fulfils his own hopes. He is like the navigator who steers by his compass and the celestial bodies, and spreads his sails to catch every favoring breeze, knowing that beyond the visible horizon lies the haven towards which his hopes of fortune impel him, and that if he guides his bark aright success will sooner or later crown his voyage. The wise man has warned us not "to make haste to be rich," and the warning is no less worthy to be had in reverence by those who seek the riches of wisdom and knowledge and skill and power than by those who covet riches that are of the earth, earthy. No more than Rome was any man's fame ever built in a day. It is the result of patient labor, of sagacious foresight, of daily additions to knowledge, of incessant training of the faculties, while

fail to make a poet, so the profoundest knowledge of physiology and of all the sciences tributary to medicine would entirely fail to make a competent physician. *Medicine is a faculty to be acquired, not a lesson to be learned; . . . not to be reduced to the hard and inelastic formulæ of science. In itself, I reverence science; but, in the interests of true progress and of humanity, I trust we shall, for the future, hear more of the art of healing and less of the science of medicine.*"—*London Lancet*, June, 1869, p. 775.

Nearly ten years after the utterance of these admirable truths they were echoed in the Hunterian oration of Dr. Moxon: "The biologist and the physician," he says, "work in opposite directions, if upon the same lines. The biologist, if he shows any aim at all, stretches himself out to learn the first beginnings of life and its smallest minutiae. The task of the physician is in quite a different direction. . . . The physiologist considers the origin of the spirit of life, while we have to consider the very different question of how the living thing beats itself to pieces. . . . Our modern tendency is to spend the larger part of a man's time in teaching him professional biology; and there is growing up a generation of physicians, through the long prevalence of that system, who are so imbued with the scientific spirit as absolutely to forget, in the highest issues, that their profession has any practical aim."—*Medical Times and Gazette*, March, 1877, p. 228.

To the acceptance of these doctrines the medical profession must sooner or later return, as it always has done after a season spent in "whoring after false gods." The theories that have from time to time enslaved it are, after all, but superficial influences, while all the while the great body of medical art founded upon clinical experience has remained as undisturbed, during the lapse of ages, as the depths of the ocean are by the storms that vex its surface.

the mind is steadily fixed on the proposed end, and every power is strengthened by the effort to attain it. Weak men live from hand to mouth, from day to day; they are literally day-laborers, and their rewards are, in like manner, transient. They lay up no capital for future use. They are like architects who construct many foundations, but build nothing upon them, and, in the end, leave behind them only the ruins of what should have grown into palaces and monuments. Strong men, wise men, are not solicitous about the judgment of the world on their unfinished plans: they do not waste their time and strength in courting the applause of the transient present. They let their work speak for itself. If it is approved by those who are fitted to judge, so much the better; but if it is not, none the less do they persevere in their determined plan, assured that, if they have judged rightly in the beginning, they will in the end reap the reward that never fails to crown sooner or later all that is substantially excellent. It is sad to see how much wasted power, how much misdirected zeal, how much untimely withering of fruit, there is in the world; how much labor is unrequited because it had no fixed purpose to attain; how many a goodly harvest is lost because it was put to the sickle before it was ripe. "Bide your time," my young friends, but abide not in idleness or sport, but in diligence, in steadiness, in perseverance, and, above all, in that faith which overcomes,—faith in yourselves and in the end on which you have fixed the eye of your ambition.

"Build, that the walls to coming generations
Your skill, your strength, your faithfulness, shall tell;
That all may say, as storms and centuries test them,
The men of old built well."*

THE GENIUS OF MEDICINE.

*An Inaugural Address delivered at the Opening of the
Fifty-Ninth Annual Course of Lectures at the Jefferson
Medical College, Philadelphia, October 1, 1883,*

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GENTLEMEN,—A just conception of medicine is essential to the best medical study and to the most successful medical life. He who would be a physician, indeed, must know the true character of medicine, its spirit, its genius. As thy

faith is, so shall it be unto thee, has a far wider meaning than that which belongs to a single event of life. Thy faith? Thy conception, thy belief, thy ideal, thy fixed conviction, a power permeating the soul, *informing* desire and thought, pervading words and deeds, and living in thy life.

It is, therefore, believed that the Genius of Medicine is an appropriate theme for the occasion,—the beginning of the annual course of lectures in this honored institution.

But what is the Genius of Medicine? As the prism separates the solar beam into the many colors which, again combined, make pure light, so we may take the various characteristics of this genius, which, by their union, make its living power.

First, this genius, this spirit of medicine, is scientific. A witty Frenchman,† referring to the scientific claims of medicine, gives, as a positive proof that a science does not yet exist, the fact that such alleged science is held to be common property, adding, in illustration, "My porter does not hesitate to diagnose a disease, to point out its cause, to prescribe a remedy, and to predict the result. He thinks he has a right to do so, and it seems that he has, for one readily listens to him, and often follows his advice."

But tried by this test many an admitted science would lose its claim. Meteorology is a science, but are weather-prophecies confined to those who have studied it? There are many persons, both in country and in town, who have that

"Old experience which doth attain
To something of the prophetic strain,"

and who often foretell with great certainty the weather which the day or the morrow will bring forth; at least their prophecies are quite as frequently verified as the correct diagnosis and treatment of disease are made by the ignorant. Theology is a science, and yet a well-known lawyer, possibly more famous for his oratory than for his legal learning, does not hesitate to decide the gravest theological problems,—giving his solution from the platform with the greatest generosity to his suffering fellow-beings at fifty cents a head,—problems that have engaged the prolonged and profound study of great divines, such as Edwards, Stuart, Alexander, Hodge, Breckinridge, Thornwell. Law is a science, but

* S. H. Browne, Continent, October, 1882.

† Louis Peisse, La Médecine et les Médecins.

some man who never gave a thought to Blackstone or Coke, except possibly as suggestive of winter fuel, may offer to solve legal problems, and sometimes may predict the decision of a court, or the verdict of a jury, quite as correctly as even a Philadelphia lawyer.

But, passing from this negative criticism, Comte's definition of a science as that knowledge which enables us to foresee and foretell results, justifies giving this name to medicine. Let any case of common disease be examined by half a dozen educated physicians, and there would be in almost all instances entire agreement as to the nature of the malady, as to its course, and as to the means advisable to alleviate it or to shorten its duration. The natural history of diseases is so well known that the physician can in most cases foresee and foretell their course. "It is not essential to science that it be at any given time complete or free from error. It is called science in reference to the aims and methods of the intellectual process of which it is the result, not in reference to its own absolute correctness and completeness." What adventurous explorer in any part of the domain of physical science dare say he has seen the pillars of Hercules, that there is nothing more to learn, or nothing to unlearn?

The certainties in diagnosis and in prognosis given in recent years by the thermometer, the microscope, the ophthalmoscope, the laryngoscope, the spectroscope, and the sphygmograph, add to the just claim of medicine to be called science; and, finally, the electric light waits to reveal pathological changes in the living hitherto recognized only after death.

In the department of therapeutics very important advances have been made in recent years; indeed, the treatment of disease becomes every year more scientific, less empirical. In this treatment physicians generally prefer a few and simple rather than many and compound remedies, an Enfield rifle rather than a Gatling gun. But in this they imitate the great masters. Hippocrates used but few medicines. Sydenham half jestingly said that he could carry all the medicine he needed in the head of his cane; and Boerhaave, I believe, said that the enlightened physician could practise medicine with opium, cinchona, tartar emetic, wine, and water. If Hoffman were to return to this earth, he, while still

using his famous anodyne, would rejoice in the great advance made in therapeutics, and cheerfully recant the famous declaration of scepticism he made: *Fuge medicos et medicamenta, si vis esse salvus.*

While rejoicing in the important position which medicine holds to-day, the student must not forget that the foundations of our science were laid, and the form of the superstructure largely directed, by that noble Greek who must ever be among physicians as Alexander among warriors, Homer among poets, and Plato among philosophers,—the divine Hippocrates. It seems certain that neither the Jews nor the Egyptians made any important contribution to the beginning of scientific medicine, though recently it has been stated* that the physicians in the time of the Pharaohs recognized the heart as the centre of the circulatory system, and referred the beating of the pulse to its movements. Still other discoveries are attributed to the priestly physicians of the Nile.

Nevertheless the general rule is, as stated by Boyer, that in all peoples who have left durable traces in the arts and sciences, the arts have flourished first; the imagination awakens the other faculties, the poets open the scene, the philosophers and *savants* follow. But Egypt failed to take the first step. The Jews, indeed, had their poets, whose lips were touched with hallowed fire, and whose sublime utterances are for all the races and all the ages; but it must be remembered that this people had an admirable system of preventive medicine, and therefore but little necessity existed for the study of the cure of disease.

Darembert† has clearly shown that Greek medicine, the origin of the medicine of to-day, came neither from the temples, nor from the gymnasia, nor from the schools of philosophy, but from the laboratory of physicians. In Homer the medicine is quite human, and even on Olympus the physician of the gods used means familiar to the physicians of the Greek army. He further observes that theurgic medicine occasionally appears in the time intervening between Homer and Hippocrates, but true medicine still lived without eclipse, just as it lives to-day without eclipse by spirit-rapping, animal magnetism, or homœopathy. Æsculapius, who

* Dr. George Elbers, *Contemporary Review*, June, 1883.

† *Histoire des Sciences Médicales*. Paris, 1870.

was the chief medical officer of the Greek army, seems to have been brevetted for distinguished services: as he did not want an office, he was given divine honors. But, sad to say, getting his godship had a very bad effect upon his character; he became so extremely avaricious, he did worse than engage in the grave-robbing business, he went to breaking open the jail and letting prisoners out, provided they paid him well; in other words, he restored the dead to life. As this sort of work threatened to depopulate Hades, Pluto, who was engaged in the wholesale undertaking business, made appeal to Jupiter, who, very properly and promptly, with one of those many thunderbolts which he had at hand, knocked Æsculapius forever out of time. Since then doctors have let dead people stay dead, influenced to this conservative conduct quite as much by fear of the fate of Æsculapius as by the reason which Molière has put in the mouth of Sganarelle: "The best of this profession is, that there is the greatest honesty and discretion among the dead; for you never find them complain of the physician who has killed them."

But, leaving myths that came into the history of medicine after Homer sang the wrath of Achilles, let us see something of the work that Hippocrates did towards the establishment of scientific medicine. He emancipated medicine from superstition and charlatanry; he co-ordinated facts that had been collected, separated between the true and the false; he taught that pathology was a part of physiology; he urged the importance of careful clinical observation. Lord Bacon, whose great mind grasped so many subjects of human knowledge, irradiating all it touched, gives just honor and importance to medicine, but condemns "the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they were judged by recovery or death."

That the medical views of Hippocrates were eminently catholic is shown by the fact that many of the schools springing up after his day claimed his authority; but he belonged to none; he belonged to all, for he had uttered such truth as each had; he had united these individual truths in a harmonious whole, which they took asunder, trying, as some medical sects

do to-day, to build a house with a single brick. Malarial fever is known to occur sometimes in puerperal women, and within a few years a question of priority in its description has been mooted relating to two distinguished American physicians. But the disease was most accurately described in the beginning of the present century by Oslander, and by Torti at a still earlier date. I believe we must go back very much farther, finding the first reference to the disorder in Hippocrates: certainly he has described a disease now known as 'puerperal septicæmia. Littré has shown that this man, whom Galen termed the greatest of physicians and the first of philosophers, observed facts more than 300 years B.C. which have been re-discovered in our day. Thus, in "the Epidemics" he describes a disease characterized by cough, which was often followed by paralysis: this disease was diphtheritic angina, sometimes simple angina, as shown by Gubler and Trousseau. For twenty-two centuries the connection between angina and paralysis was not recognized. According to Laennec, Hippocrates furnishes the germ of auscultation.* He describes paralysis of the veil of the palate accompanying paralysis of the face; lesions of the right side of the brain causing paralysis of the opposite side of the body; muscular atrophy following paralysis; erysipelas of the throat complicating erysipelas of the skin; gangrenous erysipelas; hydatid cysts of the lung.

The character and work of this wonderful man have thus been summed up:† a man grave, modest, wise, charitable, careful of the dignity of his art, avowing his frequent powerlessness; a sagacious observer, endowed with exquisite medical sense, judging phenomena in their connection, he assured to medicine a form which has triumphed over the ages.

But, further, the genius of Hippocrates made known what Chauffard‡ eulogized as the traditional truths of medicine. These primordial truths are the autonomy of life, the unity of existence, its spontaneity, and its own finality. These principles were the soul of Hippocratic medicine; they animated it, gave it life, and, under their inspiration, though the anatomy and physi-

* "Physicians who understand percussion and auscultation have half of medicine and two-thirds of diagnosis."—*Darëmborg*.

† *Revue des Deux Mondes*, 1883.

‡ *Des Vérités traditionnelles en Médecine*.

ology of the day were in almost hopeless infancy, a body of medical doctrine, a system of medical science, was formed. From age to age, through all the development of the science, these truths, the first views because they are first in splendor and power, have remained in some way immutable, reappear with increasing power, lifted above all strifes, all vanishing opinions of the day, receiving a sovereign authority by common consent, transmitted from master to master, from teaching to teaching.

Medicine is not only scientific, but it is progressive; onward is ever the voice of its genius and the example of its teachers and disciples. The progress made in the past fifty years is but faint prophecy of that which will be made in the next fifty, that which hath been but the earnest of that which shall be, for the scientific spirit is everywhere quickened, the means for scientific research constantly increased and improved, the great army of workers becoming larger, and the facilities for intercommunication and for interchange of thought so great. It seems a sad thought that a successful medical book rarely lives more than twenty years; but the fact is a striking testimony to the rapidity of medical progress. How the words of our great master come to us with their simple majesty, and yet almost with the sadness of a threnody: Life is short; art is long; the occasion fleeting, experience fallacious, and judgment difficult.

The very fact that so much remains to be discovered in medicine makes it one of the most inviting subjects of study, "for the sciences always studied with keenest interest are those in a state of progress and uncertainty; absolute certainty and completion would be the paralysis of any study."

Honest pleasure and just pride in discovery await the diligent medical student. Read Aselli's account of the joy he had when he discovered the lymphatics. Think of the undying glory which belongs to the name of Harvey from his discovery of the circulation of the blood, a discovery which at first was denied by many of the physicians of his day, but gradually gained acceptance. Strange, too, to say, one of the most learned of American physicians, the late Dr. John Redman Coxe, of this city, published a work to show that of all the ancients and moderns Harvey had least to do with the discovery which has made his name immortal.

Sometimes the zeal for discovery has been so great that a false fact has been found, and physicians have disputed the question of priority: thus, two* of the profession in the seventeenth century quarrelled as to which was the first to find an acid in the blood.

Important as are discoveries in anatomy and in physiology, those discoveries which are directly applicable to the prevention of disease, such as vaccination, or for the immediate relief of pain, such as the use of anæsthetics, adding at once to the power of medical art, seem the more important. The word "art" is probably derived from the Greek *ἀρετή*, signifying *goodness, excellence, power, force*; it is, indeed, in medicine its practical goodness, excellence, power, force. Increase in medical science is the enlargement of medical art. Science, knowledge organized in a system, a body of truth, reasons, but art acts; science has laws, art has rules; science does head-work, art hand-work; science asks *why*, art knows *how*: in medicine the one is the necessary complement of the other.

In one respect the medicine of to-day is probably inferior to that of Galen's time, the inferiority being in the number of specialties. Then there were not only oculists, lithotomists, herniotomists, and others, but also doctors who did nothing but bleed, some from artery, others from vein, and doctors who limited their practice to giving clysters. If the last specialty is revived in our day, those devoted to it would doubtless take the name of *clysterodidomatists*. Ah, how the length and euphony of that word, which can be rolled as a sweet morsel in the mouth, and which one speaks so trippingly on the tongue, *clysterodidomatists*, would excite the just envy of ophthalmologist and gynæcologist, who have so greatly enriched medical language with sesquipedalian and euphonic Greek compounds!

The genius of medicine is catholic. This catholicity is evident, first, in the physician's comprehending the entire nature of man, and thus understanding his true character. To the mere physiologist, man is simply a living organism, with machinery working not unlike that of a monkey or a dog or some other inferior animal. The psychologist tells

* Viessens and Chiras.

us, in the words of Phavorinus, which were written upon the walls of Sir William Hamilton's lecture-room in the University of Edinburgh: On earth there is nothing great but man; in man there is nothing great but mind. The divine has his attention directed especially to man's moral nature, and seeks to bring it under the control of the highest motives and the most sacred influences. The political economist sees in man either producer or consumer; the legislator sees him the subject of poll-tax, if he be a man, but, if he be a woman, only a promising candidate for the burden and responsibility of a poll-tax, which then, in the belief of those who are not yet educated up to the advanced thought of the times, would be a very great poll evil. The poet, the novelist, the philosopher, each has his ideal man, and generally this ideal is very different from the actual man as the physician knows him. The doctor comprehends the three-fold nature of man,—man intellectual, moral, physical,—and thus comes to a true anthropology. He sees him, not in the framed and flattering picture of the artist, not arrayed in the clothing of social conventionalism, but without artificial adornment, and stripped of all disguise; he sees him at all times, in all places, in all circumstances; he knows the glory and the shame, the power and the weakness, the valor and the cowardice, the goodness and the wickedness, the selfishness and the self-sacrifice, the virtue and the vice, the joy, the hope, the gratitude, the love and the despair, the hate, the ingratitude, the sin and the sorrow, of this human nature.

The genius of medicine is catholic as to its creed. From Hippocrates on, true medicine has lived despite the work of system-makers and the defection of sects. Theurgic medicine, dogmatism, methodism, empiricism, humorism, pneumatism, iatro-mechanism, iatro-chemicism, vitalism, animism, no more did it permanent harm than can any of the unnamed pathies of the day.

"Like clouds that rake the mountain-summit,
Or waves that own no curbing hand,
How fast has system followed system
From sunshine to the sunless land!"

A whole truth, a half truth, has sometimes been made the foundation of a theory of a school, while the great body of medical verities was ignored. How many false

facts, too, as well as false theories, have been brought forward in medicine! Think of so able a man as Van Helmont believing and telling this story: A citizen of Brussels, having lost his nose in a combat, consulted a surgeon named Tagliacozzi. The latter, to cure the deformity, took a flap from the arm of a domestic, and the patient returned home. Thirteen months after, he was suddenly surprised by finding his nose becoming cold and immediately mortifying. How did this happen? After many lamentations and inquiries, it was learned that the domestic from whose arm the nose had been borrowed died at the moment the organ became cold. Think, too, of the illustrious Sylvius, compelling his patients to drink from one hundred and fifty to two hundred cups of tea every day. Fortunately, this practice did not prevail in 1774 in this country, when patriotic Americans were emptying the Chinese leaf by the ship-load into the sea.

Belonging to the same century as Sylvius, we have the illustrious Descartes proclaiming that man and all animals are mere automata, machines, and anticipating Professor Huxley's comparison of a man to a clock. Descartes was more generous than some who have adopted his automatic theory, for he allowed man a soul, seating it upon the pineal gland, like an English sparrow perched on the top of a telegraph-pole.

As Professor Huxley* has so highly commended his theory of automatism, let me quote a distinguished physician's† general estimate of his contributions to medicine: "Descartes introduced into physiology, and maintained in anatomy, more new errors than he destroyed old. He was the parent of the worst part of the iatro-chemical school, and the Cartesian physicians were generally very bad physiologists and only moderately good anatomists."

Descartes denied mind to animals; they did not feel any more than the plant feels the warmth of the sun or the chill of the frost; and thus vivisection was encouraged. He was himself a vivisector, and his example was followed eagerly by the recluses of Port-Royal, who made the following a syllogism of their logic: No matter thinks: every soul of beast is matter: therefore no soul of beast thinks. I would rather take my lesson in the treatment of animals from

* Address before the International Medical Congress, 1881.
† Daremberg.

Coleridge's "Ancient Mariner" than from Descartes :

"He prayeth well who loveth well
Both man and bird and beast."

The genius of medicine is catholic in its relations to science, to philosophy, and to social interests, and is one of the most important factors in the progress of civilization. But these topics can only be suggested, not enlarged upon.

Medicine is catholic in its practice. The physician is ready to relieve the poor as well as the rich, the mean as well as the noble: the cry of suffering, no matter whether it comes from hall or hovel, from virtue or vice, from learned or ignorant, is his call to duty. Hippocrates expressly directed that the physician sent for by two patients, one poor and the other rich, should go to the former; and the illustrious Bayle attended to poor clients, spending upon them in the latter years of his life a large part of that which he had accumulated by practice, saying that the rich could always get doctors. When an urgent call to the sick comes, the physician rarely thinks of his fees, but, if possible, goes at once. However, our charities for the relief of the sick poor have become so well organized, hospitals and dispensaries abounding where the best professional services can be had gratuitously, that there is less demand for the sacrifice inculcated by Hippocrates and practised by Bayle and so many others.

The genius of medicine is beneficent. It is not necessary before an audience so largely professional as this to argue that medical agents have power to assist the natural course of certain diseases to recovery, to shorten the duration of others, to arrest immediately still others, and to lessen and remove physical suffering. Inexorable death claims us all at last as victims, but his coming may be delayed, life lengthened, by the physician's art. The fact that quite a million of men, and hundreds of women, are engaged in the practice of medicine is proof that there is need for them.

Not only is the beneficence of medicine manifested in the cure of disease, but in its prevention. Sanitary science, preventive medicine, has rendered impossible those terrible epidemics which in past centuries ravaged the great centres of population. The sanitary state of a people is the criterion of their civilization.

While the most important sanitary work

belongs to health officers, to the medical members of sanitary boards, and to physicians to public institutions, yet in private practice the opportunities and the demand for this work are great. The office of family physician, that position held by the great majority of the profession, brings more happiness where the medical adviser is sincerely respected, trusted, loved, than public honors or great wealth, and offers abundant opportunities to prevent disease and to promote health. Moreover, how much the family physician can do to set lives right morally as well as physically; to allay social discord; to correct misunderstandings; to comfort the sorrowing; to give garments of praise for the spirit of heaviness; to rouse a slumbering will; sometimes to reclaim the profligate, enforcing the highest lessons of virtue from the penalties of disease; in short, to make men, women, and children healthier, happier, better! Oh, what infinite sympathy the physician learns to exercise,—the loving charity that must be his, forbearing harsh judgment and stern reproach, as he knows the frailties and the follies, the sins and the sorrows, of mortals!

Knowledge and love are necessary for this priestly calling. Hippocrates declared that ours was the most noble of arts, and that we must love man if we would exercise it aright.

Very justly, too, does he speak of the incompetent physicians of his day—who, of course, were relatively much more numerous then than now—as being like the figures which are introduced in tragedies; for, as they have the shape and dress and personal appearance of an actor, but are not actors, so, also, physicians are many in title but very few in reality.

The genius of medicine is heroic. The heroism of physicians has sometimes come from their love of science, but more frequently its source has been conscience and philanthropy. To them medicine is alike a code of morals and a mission of love. Doctors have inoculated themselves with the poison of specific disease, in some cases to study its effects, in others to allay the fears of hospital patients. On all the battle-fields, where masses of men are hurled against each other for the destruction of human life, the physician goes to save life. In hospitals, where contagious epidemics are rife, he makes his way, with never a thought of his own

safety if he can save others. When the pestilence rages in some of our Southern cities, and all who can flee from its terrors, physicians not only remain to combat the disease, but, if need be, a brave army of volunteers go to their help, laboring with them, and in many instances dying with them. The Church has its noble army of martyrs embalmed in perpetual loving remembrance. Medicine has its army of martyrs, whose names should never perish.

How many a surgeon, after performing tracheotomy in a case of diphtheria, has found the tube obstructed, his patient in peril of instant death, and has applied his mouth to the tube and removed the obstruction, saving his patient, it may be, but killing himself! When the Alabama was hopelessly disabled by the well-directed shots of the Kearsarge, the gallant surgeon, Lewellyn, got his wounded men in the only two boats left, but, though urged, refused to enter either of them, lest by overloading the safety of his patients might be imperilled, and went down with the ill-fated ship to sudden death, but to an immortal memory. It is needless to multiply cases: the history of medicine is full of instances where the physician has sacrificed himself for the good of others. Does any one suggest that Galen refused the request of Marcus Aurelius to accompany the army against the Germanic tribes, and that he ran away from Rome because of the plague? As to the first, possibly Galen had no taste for military surgery, and he wanted to finish in the quietness of his Roman home some one of the three or four hundred volumes he wrote. As to the second charge, running away from the plague, who knows but that was a campaign lie? The Greek doctors at Rome said all sorts of naughty things about Galen, scarcely scrupled at any means in their efforts to break him down, and, as probably some know, medical campaigns even in this day occasionally fail in always giving illustrations of the love of truth characteristic of George Washington.

Nevertheless, I am afraid the case against Galen* is too strong to admit of excuse: it can only be said that his conduct was

quite exceptional: the great majority of the profession meet disease rather than run away from it, risking their lives bravely and cheerfully if thereby they can save the lives of others.

Finally, the genius of medicine is reverent. This human body even in its dumb dissection speaks of power and wisdom that no merely human hypothesis can explain. Even conceding Haeckel's assertion of spontaneous generation as the beginning of life on this earth, and from this starting-point tracing the evolution of man, it is utterly inconceivable that such result should be accomplished without a directing mind. However, this opens too wide a discussion for the present occasion, though even Dr. Maudsley, in his recent work upon "Body and Will," says, in referring to the ovum, "in its nature is inscribed the architectural *plan* or *form* of its development," and one naturally asks, "Who made that plan?" It is vain to attempt to get rid of the notion that a product implies a producer, that houses and books, watches, and all wonderful pieces of machinery, never make themselves, but that they are the thoughts of men given expression and form; the common sense of men revolts at the suggestion that this world, with its flora and fauna, is such an infinitely improbable accident as could be made by a blind evolution. If, says Voltaire, a watch proves a watchmaker, a palace an architect, how is it that the universe does not demonstrate a supreme intelligence? What plant, what animal, what element, what star, does not bear the imprint of Him whom Plato called the eternal Geometer? It seems to me that the body of the least animal demonstrates a profoundness and unity of design which ought to enrapture us with admiration.

It is useless for any one to tell us that monism and evolution explain the mysteries of organic life, and of man, the highest in earth's creation; we must still believe in design, and in an intelligent designer, no matter how near to or remote from his work, no matter whether the chain of second causes has a dozen or a million links.

In the study of anatomy and physiology the evidences of design, of contrivance, are apparent to every thoughtful mind. Let me suggest from the almost infinite number a few: some of the veins in the human body have valves, others, as the visceral veins and the vena portarum, are

* Dechambre, in his interesting article upon *Déontologie*, in the "Dictionnaire Encyclopédique des Sciences Médicales," suggests that Galen went away to escape the hatred of the Greek doctors. The plague of lying lips may be worse than any bodily plague, and the pestilent breath of the slanderer, who tries to traduce any one who is more prominent than he, may be feared more than physical disease.

valveless, and the law, as stated by Marey, is that those veins do not have valves which are not subject to localized and intermittent pressure. This difference cannot result from chance. The walls of the left ventricle of the heart are much thicker than those of the right; but in the foetus the walls are of equal thickness: a study of the difference between the intra-uterine and extra-uterine circulation gives a reason for this difference. Why should the sebaceous glands of the foetus be so active that its body is more or less covered with fatty matter? Because, immersed in the fluid it is, there would be probably a dangerous osmosis from its blood, and it would present at birth a shrivelled, wrinkled appearance, like one's hands after having been kept in water for some time. In the latter part of pregnancy the fibrin undergoes a wonderful increase. Why? As the most important safeguard against post-partum hemorrhage. But I cannot continue these illustrations. Observe, think, in the course of your professional studies, and you will find abundant reason for faith in final causes.

The great founder of pathological anatomy, Morgagni, said, "The more I study anatomy, physiology, pathology, and pathological anatomy, the better I know God, the soul, and its immortality."

I believe that whether we take medicine as a study or as a practice, or the examples of the most illustrious men in the profession, we may justly say that the genius of medicine is profoundly reverent. "The grand voices of the profession unite with the grand voice of nature to affirm the existence and the attributes of a supreme legislator, that of our spiritual nature, of the faculties which distinguish it, and the certainty of our future destiny."

TRANSLATIONS.

A NEW URINARY TEST.—A solution of sulphodiabenzole under certain conditions gives a characteristic reaction with the urine in several pathological conditions. According to Ehrlich, the solution is prepared by acidifying 500 C.c. of water with 30–50 C.c. of pure sulphuric acid, and then adding sulph-anilinic acid until an excess remains undissolved, and then a few grains of nitrate of soda in solution in

water. In summer this solution may be kept for two or three days, while in winter it remains unaltered for five. If equal amounts of this reagent and urine from a case of typhoid fever are mixed, and then a little ammonia added, an intense scarlet red is developed. Normal urine does not produce this result. With the exception of pulmonary phthisis, this reaction is nearly always associated with the febrile state, while its appearance is especially constant in typhoid fever. Penzoldt has also experimented with this reagent, and has obtained the characteristic reaction in diabetic urine, even when the urine contains only one part per thousand of sugar. —*Centralb. f. d. Med. Wissen.*, August 4, 1883.

THE TREATMENT OF IRREDUCIBLE LUXATIONS.—In an interesting article on this subject, Rosenmeyer states that in most cases of irreducible luxation of the shoulder a high degree of usefulness may be restored to the joint by the constant and prolonged use of passive movements, massage, electricity, and warm baths; but when the mobility of the false joint is very slight, when great pain is caused by pressure on the nerve, or when the muscles are commencing to atrophy, arthrotomy is to be recommended. If the dislocation is of very old standing and extensive changes have taken place in the joint-socket, then resection of the head of the humerus should be performed. In the case of the elbow-joint, the results obtainable by passive movements, subcutaneous section of muscles, tendons, adhesions, etc., are far inferior to those which follow the resection of the joint.—*Centralblatt für Chirurgie*, August 4, 1883.

AN IMPORTANT MODIFICATION OF THE CATHETER.—In a communication to the *Berliner Klinische Wochenschrift*, F. Hüpeden calls attention to the danger of introducing infectious material into the bladder in catheterization, on account of a difficulty experienced in cleansing the ordinary catheter. The end of the catheter beyond the vesical opening forms a chamber for the accumulation of organic material, which is very difficult to dislodge. The recommendation is made that this end be filled up with metal, so that the danger of causing putrefactive changes in the residual urine in the bladder may be avoided, with ordinary care.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 20, 1883.

EDITORIAL.

OUR EDUCATIONAL NUMBER.

IT has long been the custom with some of the leading European medical journals to devote at least one issue annually to the systematic consideration of medical education, giving especial attention to the *personnel* of the various local schools, with such information as to lectures, fees, requirements, etc., as experience had shown was of the most interest to prospective or actual students. Such issues, known as the "students' number," or "educational number," have been much sought after on account of the important information which they contain. For this reason, of late years, similar reports have been published by some of our prominent American contemporaries, notably the *Boston Medical and Surgical Journal*, and recently the *New York Medical Journal*.

Realizing the impossibility of giving any just and satisfactory report of the eighty-nine regular medical colleges in the United States now in active operation, in the space at our command, or even of the sixty-three of them which have received the endorsement of the Illinois State Board of Health, we have in our present issue, without attempting a complete analysis of the subject of medical education in the United States, sought to improve the opportunity offered by the publication of the opening addresses at our two leading medical schools, to communicate some interesting information upon medical education sent us by some of our correspondents in a few only of the principal medical centres of this country.

The "students' number" of the *London Medical Record*, for September, contains

valuable material for reference concerning foreign medical schools, but much more information of the kind desired by those who wish to visit or study abroad may be found in a little work just published by William Wood & Co., entitled "A Guide to American Medical Students in Europe," written by Prof. Hun, of Albany. For those desiring a complete, systematic comparison of American medical schools we recommend a perusal of a pamphlet recently issued by the Illinois State Board of Health, which is a very valuable report on "Medical Education and the Regulation of the Practice of Medicine in the United States and Canada." It contains a summary of the laws governing the practice of medicine in the different States (alphabetically arranged for easy reference), together with well-digested information concerning the several colleges, which gives it permanent value. From it we learn that there are eighty-nine colleges now in existence in the United States, of which fifty-five exact a preliminary education as a condition of matriculation, and fifteen require attendance upon three full courses of lectures before graduation. There have been, also, several post-graduate schools started within a few years. These figures are not without encouragement to advocates of higher medical education.

We have departed somewhat in this issue from the usual arrangement, in order to publish simultaneously the opening lectures of Professors Stillé and Parvin. By the majority of our readers we believe that the able and earnest utterances of these distinguished teachers and authors, who have contributed their addresses to our pages, will be read with interest and advantage.

Medical education in this country of the colleges is now in a transition stage, but the promise of advancement is seen on every hand. In the inevitable struggle for life it is evident that, if the medical pro-

fession will but do its part, the survival of those colleges only that are most fit to be intrusted with the education of future physicians will be assured. We note with pleasure the evidences of real progress that are seen on every side.

THE ATTITUDE OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY TOWARDS WOMEN CANDIDATES.

THE Philadelphia County Medical Society, at its last business meeting, again rejected women candidates for membership, although they had been properly recommended by the Board of Censors. Inasmuch as the American Medical Association recognizes the right of women practitioners to belong to the county medical societies, and receives them as delegates at its annual sessions, it would certainly appear that the women physicians of Philadelphia County cannot lawfully be deprived in this manner of their right of representation and membership in the National Association, even to gratify the caprice or prejudice of certain individuals.

The Philadelphia County Medical Society, moreover, is a branch organization of, and subordinate to, the Pennsylvania State Medical Society, which admits women delegates: how, then, can it assume to represent *all* the regular medical practitioners of Philadelphia County when it persistently refuses to receive a certain proportion of them as members? The society of any county must either faithfully represent all regular physicians practising in its territory, or yield its place to a new society that will do so. It is acknowledged to be the duty of all regular physicians in good standing in the profession to belong to their county or district medical society, and if approved by the Censors *they have a right to admission*, and no man, or combination of men, can justly deny them this right. It has been con-

ceded that the candidates referred to were eligible under the By-Laws of the Society, and had a right to admission established both by precedent and by law: can the Society, therefore, afford to stultify itself by continuing its present attitude towards women candidates for membership?

NOTES FROM SPECIAL CORRESPONDENTS.

MEDICAL EDUCATION IN PHILADELPHIA.

THE problem of medical education, in which should be included the development and cultivation of those faculties required in the true physician, as well as the ordinary technical instruction, has been solved by Philadelphia schools better than any other medical colleges on the continent, if the number of graduates and the position filled by them in the American medical profession may be taken as a fair criterion. An examination into the present methods of teaching shows the result of an evolution which has steadily kept up with, if indeed now it is not really ahead of, the actual requirements of the community. In discussing heredity in his recent work, Francis Galton has stated it as a fact that our culture has advanced beyond our mental capacity; and we may certainly accept this as applied to medical culture, for the resources of the art of medicine are at the present day far beyond the capacity of the general public to understand or to appreciate. Without pursuing this subject, let us see how Philadelphia colleges are equipped and manned for their great and responsible work.

THE UNIVERSITY OF PENNSYLVANIA, MEDICAL DEPARTMENT.

The Department of Medicine of the College of Philadelphia, as it was originally called, was organized in 1765: it held its first Commencement in 1768, and has graduated classes each succeeding year, the total number of graduates now exceeding ten thousand.

The Faculty embraces eleven chairs, which are filled as follows:

FACULTY.

- JOSEPH LEIDY, M.D., LL.D., Professor of Anatomy.
- HENRY H. SMITH, M.D., Emeritus Professor of Surgery.
- RICHARD A. F. PENROSE, M.D., LL.D., Professor of Obstetrics and Diseases of Women and Children.
- ALFRED STILLÉ, M.D., LL.D., Professor of Theory and Practice of Medicine, and of Clinical Medicine.
- D. HAYES AGNEW, M.D., LL.D., John Rhea Barton Professor of Surgery, and of Clinical Surgery.
- WILLIAM PEPPER, M.D., LL.D., Professor of Clinical Medicine, also Provost of the University and *ex-officio* President.
- WILLIAM GOODELL, M.D., Professor of Clinical Gynecology.
- JAMES TYSON, M.D., Professor of General Pathology and Morbid Anatomy, and Secretary of the Faculty.

HORATIO C. WOOD, M.D., Professor of Materia Medica, Pharmacy, and General Therapeutics.
 THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry and Toxicology.
 JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery.
 HARRISON ALLEN, M.D., Professor of Physiology.

The Faculty is assisted by the following

DEMONSTRATORS AND LECTURERS.

CHARLES T. HUNTER, M.D., Demonstrator of Anatomy.
 ROLAND G. CURTIN, M.D., Lecturer on Physical Diagnosis.
 CHARLES K. MILLS, M.D., Lecturer on Mental Diseases and Electro-Therapeutics.
 J. HENRY C. SIMES, M.D., Demonstrator of Pathological Histology.
 ADOLPH W. MILLER, M.D., Lecturer on Materia Medica and Pharmacy.
 JOSEPH G. RICHARDSON, M.D., Demonstrator of Normal Histology.
 ROBERT MEADE SMITH, M.D., Demonstrator of Experimental Physiology.
 JOHN MARSHALL, M.D., Nat.Sc. D., Demonstrator of Practical Chemistry.
 BENJAMIN F. BAER, M.D., Demonstrator of Clinical Gynecology.
 ELLIOTT RICHARDSON, M.D., Lecturer on Clinical and Operative Obstetrics.
 EDWARD T. BRUEN, M.D., Demonstrator of Clinical Medicine.
 J. WILLIAM WHITE, M.D., Demonstrator of Surgery, and Lecturer on Venereal Diseases.
 HARRY R. WHARTON, M.D., Demonstrator of Clinical Surgery.
 JOHN B. DEEVER, M.D., Demonstrator of Osteology and Syndesmology.
 HENRY F. FORMAD, M.D., Demonstrator of Morbid Anatomy, Assistant Demonstrator of Pathological Histology, and Lecturer on Experimental Pathology.
 EDWARD T. REICHERT, M.D., Demonstrator of Experimental Therapeutics.

The course of instruction consists each year of a regular winter term of twenty-eight weeks' duration from the first Monday in October, which is obligatory, and a three weeks' preparatory course, and a spring course of eleven weeks, attendance upon which is not required. The curriculum is a graded one of three years' duration, but a four years' course is encouraged by the Faculty. Examinations are held at the end of each term. The requirements for admission are either the possession of a collegiate degree, a certificate from a high school, one from a board of managers of a county medical society, or a preliminary examination.* For graduation the candidate must be twenty-one years of age, of good moral character, and must have attended three full courses of lectures, passed the final examination, and written an accepted thesis. Tickets of other regular colleges are recognized, and graduates of other medical colleges are admitted to the three years' course without examination. Fees are five dollars for matriculation, paid once; and one hundred and fifty dollars for each course of lectures, including laboratory and dissection. No graduation fee.

Concerning the methods of study, we learn that during the first and second years much

of the student's time is occupied with practical work in the various laboratories, of chemistry, pharmacy, osteology, histology, and pathological histology, and in dissection; but throughout the second and third years he is required to attend the general medical and surgical clinics at the University and Philadelphia hospitals, while special clinical facilities are provided for the third year. In this year each student receives bedside instruction in clinical medicine and surgery, in physical diagnosis, and in gynecology. Opportunities are afforded for the practical study of diseases of the eye, ear, throat, and skin, and for acquiring proficiency in the use of the various instruments employed in their treatment. For this purpose the third-year class is divided into sections of convenient size, each of which receives direct personal instruction in the various practical subjects above mentioned. In the fourth year, recently organized to go into operation with the session of 1883-84, and upon which attendance is voluntary, the instruction is almost purely practical in character.

A prominent feature of the present curriculum is systematic laboratory work in the fundamental medical sciences, as well as the personal teaching of each student in practical subjects of the greatest importance, such as physical diagnosis, clinical medicine, clinical surgery, and clinical gynecology. Students of the Medical Department of the University are now not only trained in the theory of medicine, but are also taught to perform chemical, pharmaceutical, and microscopical manipulations, to diagnose and treat medical and surgical diseases, and to recognize their post-mortem appearances. Exclusively didactic teaching has been universally abandoned in every branch of scientific and technical education, save the medical. Therefore, in establishing the present method, the trustees and the medical Faculty of the University felt that they were only adopting one which, in other departments of science, had produced the most valuable fruits. This result shows that, sooner or later, medical teaching in this country must be conformed to the system which has long been recognized as the only one suitable in the great medical centres of Europe.

The secretary of the Faculty, Prof. James Tyson, in reply to a request for information, kindly states that "the first-year class will certainly number one hundred and forty, which is larger than it has ever been since the inauguration of the three-years graded curriculum. Last year it numbered one hundred and fifteen. The year before we put on the admission examinations, it reached one hundred and thirty-seven; the session immediately following the admission examinations it fell to one hundred and ten; the next, to ninety-eight; the next, which was last year, it rose to one hundred and fifteen, and this

* Examinations for admission will be held annually hereafter during the first week in September in the cities of Boston, Mass., Rochester, N.Y., Raleigh, N.C., Columbia, Tenn., Atlanta, Ga., Mobile, Ala., Cincinnati, O., Chicago, Ill., Detroit, Mich., St. Louis, Mo., St. Paul, Minn., and San Francisco, Cal. This provision is made solely for the convenience of the student. He can, of course, be examined in Philadelphia if preferred.

year to one hundred and forty." He adds, "This is increase quite rapid enough, but, if it were not for the expenses of the course, I am sure there would be many more. The increasing of the term to seven months seems to have had no effect in throwing us back." A voluntary fourth-year class has been formed this year. The Towne Scientific School offers a good preparatory course for those who intend taking the medical degree.

The present course opened October 1, by an address by Prof. Stillé (see page 41); the term will end April 12, 1884.

A course has also been organized for post-graduate instruction.

The post-graduate instruction in connection with this University for the year 1883 is divided into three terms, as follows:

- (1) From January 2 to March 1, inclusive.
- (2) From April 9 to June 9, inclusive.
- (3) From October 29 to December 24, inclusive.

The following subjects are taught:

CLINICAL MEDICINE AND PHYSICAL DIAGNOSIS, by Prof. Pepper and Dr. Bruen.

RENAL DISEASES, WITH PRACTICAL EXAMINATION OF URINE, by Prof. Tyson and Dr. Formad.

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS, by Prof. Wood and Dr. Mills.

CLINICAL SURGERY, by Prof. Ashhurst and Dr. Wharton.

OPHTHALMOLOGY, by Prof. Norris and Dr. Risley.

DERMATOLOGY, by Prof. Duhring.

OTOLOGY, by Prof. Strawbridge.

GYNÆCOLOGY, by Prof. Goodell and Dr. Baer.

OPERATIVE AND GENITO-URINARY SURGERY, WITH VENEREAL DISEASES, by Dr. White.

CLINICAL AND OPERATIVE OBSTETRICS, by Dr. Elliott Richardson.

LARYNGOLOGY, by Dr. Seiler.

DISEASES OF CHILDREN, by Dr. Start and Dr. Keating.

The teaching consists in bedside and dispensary lessons, in the practical examination of patients, and in the use of instruments of precision in the diagnosis and treatment of disease, to classes composed of graduates only. There are two classes of graduates to whom these courses are adapted: first, recent graduates, and second, those who have been for some years engaged in practice at a distance from medical centres. To the latter, the review afforded by such practical courses has been found peculiarly advantageous. From one to three hours weekly are devoted to these objects in each of the branches named. In clinical medicine one hour weekly will be devoted to a clinical conference.

In addition, the classes are permitted to attend the general and special clinics of the University and such didactic lectures as do not occur in the hours devoted to post-graduate instruction.

In addition to the above courses, the following are also given:

PRACTICAL PHYSIOLOGY, by Dr. ROBERT MEADE SMITH. Systematic Instruction in Experimental Physiology and Experimental Therapeutics, and the superintendence of Original Investigations.

MEDICAL CHEMISTRY, by Professor WORMLEY and Dr. MARSHALL. Including Toxicological and Medico-Legal Studies, Investigation of Blood-Stains, and Physiological Chemistry.

HISTOLOGY AND PATHOLOGY, by Dr. H. F. FORMAD.

Two courses: I. Normal and Pathological Histology, including Microscopic Technology; the opportunity of witnessing and making Post-mortem Examinations. Winter and spring months. II. Experimental Histology and Experimental Pathology.

The fees for this course can be ascertained on application. There is no expense attached to the course of preliminary lectures.

There is also an Auxiliary Department of Medicine, distinct from the others, which supplements the winter lectures by a course given during the spring months on certain collateral branches of science. Graduates of this school, after attendance upon two full courses of lectures and examination, receive the degree of Bachelor of Science.

Its Faculty consists of

JOHN J. REESE, A.M., M.D., Professor of Medical Jurisprudence and Toxicology.

SAMUEL B. HOWELL, M.D., Professor of Mineralogy and Geology.

JOSEPH T. ROTHROCK, B.S., M.D., Professor of Botany.

JOSEPH G. RICHARDSON, M.D., Professor of Hygiene.

ANDREW J. PARKER, M.D., Ph.D., Professor of Comparative Anatomy and Zoology.

A Department of Philosophy also exists, with the following corps of instructors:

E. OTIS KENDALL, LL.D., Professor of Mathematics, and Dean of the Faculty.

JOSEPH LEIDY, M.D., LL.D., Professor of Zoology.

J. PETER LESLEY, LL.D., Professor of Geology.

J. I. CLARK HARE, LL.D., Professor of Law.

REV. ROBERT E. THOMPSON, A.M., Professor of Political and Social Science.

FREDERICK A. GENTH, Ph.D. (Marburg), Professor of Inorganic Chemistry.

SAMUEL B. HOWELL, M.D., Assistant Professor of Geology.

GEORGE F. BARKER, M.D., Professor of Physics.

GEORGE A. KENIG, Ph.D. (Heidelberg), Professor of Mineralogy.

HUGH A. CLARKE, Professor of Music.

JOSEPH T. ROTHROCK, B.S., M.D., Professor of Botany.

THEODORE G. WORMLEY, M.D., LL.D., Professor of Organic Chemistry.

ANDREW J. PARKER, M.D., Ph.D., Assistant Professor of Zoology.

MORTON W. EASTON, Ph.D., Professor of Comparative Philology.

— Professor of History,

— Professor of Philosophy.

The Faculty of Philosophy has recently been organized for the supervision of advanced studies in the several departments of literature and science. The degree conferred upon recommendation of this Faculty is that of Doctor of Philosophy. The courses, which cover a period of at least two years, are open to graduates in any department of this or like institutions, and to others who can pass a satisfactory examination.

Among the other departments of the University may be mentioned a Dental Department, which is in a flourishing condition. Its Faculty consists of

CHARLES J. ESSIG, M.D., D.D.S., Professor of Mechanica Dentistry and Metallurgy.

EDWIN T. DARBY, M.D., D.D.S., Professor of Operative Dentistry and Dental Histology.

JAMES TRUMAN, D.D.S., Professor of Dental Pathology Therapeutics, and Materia Medica.

JOSEPH LEIDY, M.D., LL.D., Professor of Anatomy.

HARRISON ALLEN, M.D., Professor of Physiology.

THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry.

ROBERT HUEY, D.D.S., Lecturer on Operative Dentistry.

The buildings of the University are located

upon elevated ground, and occupy a commanding position upon the west side of the Schuylkill River; they consist of the Departments of Arts and Towne Scientific School, in addition to the Medical and Dental buildings, and the laboratory, and a large general hospital.

THE JEFFERSON MEDICAL COLLEGE.

The Jefferson Medical College was originally the medical department of the Jefferson College at Canonsburg, Pennsylvania, which was a university, but is now defunct, the medical department having survived, and having succeeded to the rights and privileges of the parent institution. In conformity with this, it usually confers, at the annual Commencement, honorary degrees of Doctor of Laws or Doctor of Divinity through its board of trustees, but no honorary degrees in medicine are given. The first class was graduated from this institution in 1827, and others have been graduated each subsequent year. The total number of graduates is eight thousand one hundred and forty-three.

The curriculum includes an obligatory winter course, extending over twenty-six weeks, with a preliminary session of three weeks, and a spring course of eight weeks, attendance upon which is not required for graduation. The present course began October 1, with an introductory address by Prof. Parvin (see page 51). The Commencement will be held March 29, 1884, after the close of the lectures.

The Faculty of the college, with the subjects lectured upon, are as follows:

SAMUEL D. GROSS, M.D., LL.D., D.C.L. Oxon., LL.D. Cantab., Institutes and Practice of Surgery (Emeritus).
 ELLERSLIE WALLACE, M.D., Obstetrics and Diseases of Women and Children (Emeritus).
 J. M. DA COSTA, M.D., Practice of Medicine.
 WILLIAM H. PANCOAST, M.D., General, Descriptive, and Surgical Anatomy.
 ROBERT E. ROGERS, M.D., LL.D., Medical Chemistry and Toxicology.
 ROBERTS BARTHOLOW, M.D., LL.D., Materia Medica and General Therapeutics.
 HENRY C. CHAPMAN, M.D., Institutes of Medicine and Medical Jurisprudence.
 SAMUEL W. GROSS, M.D., Principles of Surgery and Clinical Surgery.
 JOHN H. BRINTON, M.D., Practice of Surgery and Clinical Surgery.
 THEOPHILUS PARVIN, M.D., LL.D., Obstetrics and Diseases of Women and Children.
 WILLIAM THOMSON, M.D., Honorary Professor of Ophthalmology.
 J. SOLIS COHEN, M.D., Honorary Professor of Laryngology.

DEMONSTRATORS.

WILLIAM S. FORBES, M.D., Demonstrator of Anatomy.
 J. EWING MEARS, M.D., Demonstrator of Surgery.
 G. MASON WARD, M.D., Demonstrator of Chemistry.
 MORRIS LONGSTRETH, M.D., Demonstrator of Pathological Anatomy, and Curator of the Museum.
 COCHRAN McCLELLAND, M.D., Demonstrator of Obstetrics.
 DAN. E. HUGHES, M.D., Demonstrator of Clinical Medicine.
 S. MASON MCCOLLIN, M.D., Demonstrator of Pharmacy and Materia Medica.
 A. P. BRUBAKER, M.D., Demonstrator of Physiology and Histology.

The college buildings are situated on Tenth Street, between Chestnut and Walnut, and

comprise a medical hall, laboratory building, and hospital immediately adjacent. This central position gives to the school many advantages; among them an extensive choice of homes for the student convenient to the college, and proximity to the various business houses with which the student may have occasion to deal, as well as to the Pennsylvania Hospital.

The college building proper contains two large, well-arranged, and well-ventilated lecture-rooms. In the summer of 1881 the main building was remodelled by an extension of the front, by adding a new story, and by constructing new laboratory-rooms. By this extension of the front, the seating-capacity of each lecture-room has been materially increased, and by the addition of another story, new and more commodious dissecting-rooms have been constructed. Large and well-lighted rooms have been provided for practical obstetrics, and for the laboratory of experimental therapeutics and pharmacy, and another with special reference to microscopical work, and for a laboratory of pathological histology and morbid anatomy.

In this building are also contained the extensive and valuable anatomical, surgical, and pathological museums.

The laboratory building, immediately adjoining the medical hall, contains the physiological and chemical laboratories, fully equipped in the materials and instruments of study and research, and also the laboratory for the demonstration of operative and minor surgery.

No preliminary examination or technical proof of preparation for medical studies is exacted; but for graduation three years' study is necessary, with attendance upon two full courses of lectures. The candidate must also be twenty-one years of age, and be of good moral character. Students of dental colleges where full courses of five months' duration are given on anatomy, materia medica, physiology, and chemistry may become candidates after attendance on two such courses and one full course at this college, with another on surgery, practice of medicine, and obstetrics. A similar arrangement is made with students of colleges of pharmacy, except that among the additional branches named must be included anatomy and physiology. The expenses are—for matriculation, \$5; graduation, \$30 (each paid once); lectures, \$140 each session; with dissecting, \$10; other practical courses free. A reduction in the tickets for the course is made to graduates in dentistry and pharmacy.

Attendance upon a third term of lectures, though not obligatory, is encouraged by the Faculty, and is followed by a considerable proportion of the class. No charge is made for the extra course of lectures, and students are permitted to take a partial examination at the end of the second course, thus devoting

the final year to the practical branches exclusively.

A post-graduate course has been inaugurated during the past year, which includes five terms of seven weeks each, and extends from October to May inclusive.

The instructors and subjects taught by them respectively are as follows:

PROF. WILLIAM THOMPSON, Ophthalmology.
 DRS. L. and CHARLES TURNBULL, Otolaryngology.
 DRS. F. H. GETCHELL and J. EWING MEARS, Gynecology.
 DR. J. C. WILSON, Physical Diagnosis, Diseases of the Chest.
 DR. O. H. ALLIS, Orthopædic Surgery.
 DR. MORRIS LONGSTRETH, Normal and Pathological Histology.
 DR. O. P. REX, Diseases of Children.
 DR. J. T. ESKRIDGE, Nervous Diseases.
 DRS. SAJOUX and JURIST, Laryngology.
 DR. J. S. NEFF, Urinary Pathology.
 DR. G. M. WARD, Medical Chemistry.
 DR. S. M. MCCOLLIN, Practical Pharmacology.
 DR. A. P. BRUBAKER, Experimental Physiology.
 DR. J. V. SHOEMAKER, Dermatology.
 DRS. A. K. MINICH and A. R. RYNEAR, Botany, Materia Medica, and Experimental Therapeutics.

All the courses will be demonstrative. The fees for each branch will range from \$10 to \$20.

THE MEDICO-CHIRURGICAL COLLEGE.

This school was organized in 1881, upon a plan which, if carried out in good faith, will go far towards elevating the standard of medical instruction and medical practice in this country. The course of instruction contains the following features: a winter's term, extending over twenty-four weeks; daily quizzes by the professors; a three years' graded course required.

The requirements for admission are a certificate of having graduated at a high school, or of having attended a classical seminary or college for at least a year, or having passed the examination of a board of examiners of a county medical society, or attendance upon the auxiliary literary term, the studies being elements of English literature and Latin, Greek, and natural science. For graduation, besides the usual requirements, the candidate must have attended three regular winter sessions, the last being in this college, and a special course of physical and practical instruction, also given at this college. The present course of lectures began October 1, and will extend twenty-four weeks.

The Faculty is constituted as follows:

GEORGE P. OLIVER, M.D., President.
 WILLIAM S. JANNEY, M.D., Principles and Practice of Surgery and Clinical Surgery.
 GEORGE E. STUBBS, M.D., Anatomy and Clinical Surgery.
 CHARLES L. MITCHELL, Ph.D., M.D., Chemistry, Sanitary Science, and Medical Jurisprudence.
 WILLIAM F. WAUGH, M.D., Principles and Practice of Medicine and Clinical Medicine.
 ABRAHAM S. GERHARD, M.D., Physiology, Pathology, and Clinical Medicine.
 WILLIAM S. STEWART, M.D. (Dean), Obstetrics, Gynecology, and Clinical Gynecology.
 FRANK O. NAGLE, M.D., Materia Medica, Therapeutics, and Clinical Medicine.

THE WOMEN'S MEDICAL COLLEGE OF PENNSYLVANIA.

This college graduated its first class in 1851,

and has continued regularly since that time. The opening lecture of the present course was delivered by the Dean, Rachel L. Bodley, M.D., October 4, 1883. The Commencement will be held March 13, 1884.

The Faculty is constituted as follows:

RACHEL L. BODLEY, M.D., Professor of Chemistry and Toxicology.
 CLARA MARSHALL, M.D., Professor of Materia Medica and General Therapeutics.
 FRANCES EMILY WHITE, M.D., Professor of Physiology and Hygiene.
 ANNA E. BROOMALL, M.D., Professor of Obstetrics.
 JAMES B. WALKER, M.D., Professor of the Principles and Practice of Medicine.
 HANNAH T. CROASDALE, M.D., Professor of Diseases of Women and Children.
 WILLIAM H. PARISH, M.D., Professor of Anatomy.
 WILLIAM W. KEEN, M.D., Professor of the Principles and Practice of Surgery.
 J. GIBBONS HUNT, M.D., Professor of Histology and Microscopy.
 C. NEWLIN PEIRCE, D.D.S., Professor of Dental Physiology and Pathology.
 HORATIO C. WOOD, JR., M.D., Lecturer on Special Subjects.
 EDWARD T. BRUEN, M.D., Lecturer on Pathology.
 CHARLES K. MILLS, M.D., Lecturer on Nervous Diseases.
 LOUIS A. DUHRING, M.D., Lecturer on Dermatology.
 ALEXANDER W. MCCOY, M.D., Lecturer on Laryngoscopy and Rhinoscopy.
 EMILIE B. DU BOIS, M.D., Demonstrator of Anatomy and Instructor in Materia Medica.
 LUCIUS E. SAYRE, Ph.G., Demonstrator of Pharmacy.
 HENRY F. FORMAD, M.D., Demonstrator of Pathology.
 IDA E. RICHARDSON, M.D., Instructor in Practice of Medicine.
 ANNA M. FULLERTON, M.D., Instructor in Obstetrics.
 LENA V. INGRAHAM, M.D., Instructor in Surgery.

This college is contributing materially to the solution of two problems,—the proper qualification of women practitioners for the practice of medicine, and the greater one of higher medical education. It was among the first in the country to lengthen its winter session; it has also adopted an optional three-years graded course, and the Faculty earnestly recommends a four-years course, with annual examinations. The lectures are intended to be on a par with those given in the higher class of medical schools in this country, and unusual facilities are given for laboratory-work and original investigation. This college pursues the plan of giving weekly reviews, or quizzes, on the lectures by regularly appointed instructors throughout the winter course. These examinations constitute a part of the college preceptorship, and are free to every student.

Besides the winter session, a spring course of lectures, of ten weeks' duration, is given.

The requirements for graduation are similar to those of the Jefferson College. The expenses are—matriculation, \$5; lectures, \$105 (each course); demonstrator of anatomy, \$10; clinical, pathological, and pharmaceutical laboratories, each \$10. Graduation fee, \$30.

No information has been supplied by the Dean as to the size of the class.

PHILADELPHIA POLYCLINIC COLLEGE FOR STUDENTS IN MEDICINE.

This institution gives to graduates instruction in the recognized medical and surgical specialties, as well as in hygiene, clinical

chemistry, fracture-dressings, and operations on the cadaver. Its system of teaching is entirely demonstrative and clinical, as it must needs be to meet the wants of practitioners who resort to the medical centres to acquire facility in the use of instruments of precision. The sessions of six weeks enable physicians to leave their practice for but a short time and yet acquire familiarity with methods of diagnosis and treatment in the fields of special medicine. The dispensary of the college, and the out-patient or home department, together with the services of various hospitals, afford opportunities for accurate study of disease. The aim of the college is to supplement the work of institutions for undergraduates by giving those who have attained the position of physician practical knowledge such as can be obtained only by performing, under competent supervision, operations and manipulations on the living subject. Its pupils, after a prescribed course and examination, may acquire the diploma of Fellowship to the Philadelphia Polyclinic and College for Graduates in Medicine, which announces to the public that the holder is not only a Doctor of Medicine, but also acquainted with the advanced specialties of the present age.

The Faculty is constituted as follows:

THOMAS G. MORTON, M.D., Clinical, Operative, and Orthopædic Surgery.
 J. SOLIS-COHEN, M.D., Diseases of the Throat and Chest.
 JOHN B. ROBERTS, M.D., Applied Anatomy and Operative Surgery.
 CHARLES H. BURNETT, M.D., Diseases of the Ear.
 CHARLES K. MILLS, M.D., Diseases of the Mind and Nervous System.
 HENRY LEFFMANN, M.D., Clinical Chemistry and Hygiene.
 ARTHUR VAN HARLINGEN, M.D., Diseases of the Skin.
 EDWARD L. DUER, M.D., Obstetrics and Diseases of Women and Children.
 GEORGE C. HARLAN, M.D., Diseases of the Eye.
 J. HENRY C. SIMES, M.D., Genito-Urinary and Venereal Diseases.
 FREDERICK P. HENRY, M.D., Pathology and Microscopy.
 WILLIAM H. PARISH, M.D., Obstetrics and Diseases of Women and Children.

Philadelphia has about twenty hospitals, nine dispensaries, and thirty-eight other charitable institutions with which infirmaries are connected. Many special branches of medicine and surgery have their distinct institutions, as the Maternity, the Orthopædic, the Hospital for Nervous Diseases, Diseases of the Skin, for Children, etc. Graduates and advanced students desiring to pursue any special branch of medical science, or any of the recognized specialties, have, therefore, admirable opportunities afforded them in these various hospitals, and other public medical institutions.

NEW YORK.

MEDICAL PRACTICE AND MEDICAL TEACHING.

THE cool weather of the fall has again brought life and activity into professional circles here. The hibernating season of our principal practitioners has closed, and their

offices are again filled with patients just returned to the city and wishing to consult on trivial or chronic ills, concerning which they did not care to go to a strange or a country doctor. But reports are frequent of a sickly season out of town, and some of our rural fellows have reaped a rich harvest off the sojourners at our fashionable resorts. Every year a number of these physicians follow their patients to the city with intent to settle here; but the formidable array of shingles upon every block soon frightens most of them away, and those who do venture generally seek a less vigorous competition before the year is out.

The epidemic of typhoid—if, indeed, such did threaten us—has been averted, and new cases now are comparatively few, much to the disgust of the deodorizer, germicide, and disinfectant men, who have flooded the city with their circulars and made large sales on the strength of our Health Board's warning. Its subsidence is probably due to the opening of the flood-gates of our aqueduct and a more abundant supply of water turned on the city. It is broadly hinted that this is due to the appropriation for a new aqueduct having been secured, and that we might have had this increased supply all the time but for political greed. It is to be regretted that such means are necessary to secure such a needed improvement. One aqueduct is not enough for a city surrounded by salt water and containing a million and a half of people: hence it may be said, this time, the end justifies the means.

There is to be an operation in one of the hospitals here before long for extirpation of the kidney, which, judging from the looks of the patient, may add another to the recent successes of that brilliant operation.

The noted Dr. Shine, who for several years has been surgeon to the Elevated Railroads of this city, has been removed to an institution for the insane in this State, and his place filled by Dr. Matthew Field. Dr. Shine was never noted for either his temperance habits or professional etiquette, and many will be glad to see his place filled by a gentleman of broader views and more polished manners. But possibly the doctor's late disagreeableness was due to his mental affection, and his misfortune should call forth our most charitable sympathies.

Suicides are becoming more frequent in our medical ranks, three having occurred in this State during the past month. An unusual one comes from the West. A recent convert to the faith-cure in Missouri believed himself possessed of the power to cure disease by laying on of hands. After trying in vain to cure his aunt's sore eyes, he concluded himself a failure and cut his own throat. How can we persuade our Eastern quacks to imitate the Missourian?

The colleges have opened here with long

matriculation-lists. The University of New York has probably outstripped the other schools, some say on account of easy examinations, but, as an outsider, it would seem to me to be from improved accommodations and the increasing prominence and personal popularity of Dr. A. H. Loomis.

COLLEGE OF PHYSICIANS AND SURGEONS.

This is the Medical Department of Columbia College, located in the city of New York.

FACULTY.

ALONZO CLARK, M.D., LL.D. (President), Pathology and Practical Medicine (Emeritus).
WILLARD PARKER, M.D., LL.D., Principles and Practice of Surgery (Emeritus).
JOHN G. CURTIS, M.D. (Secretary), Physiology and Hygiene.
THOMAS MASTERS MARKOE, M.D., Principles of Surgery.
WILLIAM DETMOLD, M.D., Clinical and Military Surgery (Emeritus).
THEODORE GAILLARD THOMAS, M.D., Clinical Gynecology.
JOHN THOMAS METCALFE, M.D., Clinical Medicine (Emeritus).
HENRY BERTON SANDS, M.D., Practice of Surgery.
JAMES WOODS McLANE, M.D., Obstetrics, Gynecology, and Diseases of Children.
THOMAS TAUNTON SABINE, M.D., Anatomy.
CHARLES FREDERIC CHANDLER, Ph.D., Chemistry and Medical Jurisprudence.
EDWARD CURTIS, M.D., Materia Medica and Therapeutics.
FRANCIS DELAFIELD, M.D., Pathology and Practical Medicine.
WILLIAM HENRY DRAFER, M.D., Clinical Medicine.

CLINICAL PROFESSORS.

CORNELIUS REA AGNEW, M.D., Diseases of the Eye and Ear.
ABRAHAM JACOBI, M.D., Diseases of Children.
FESSENDEN NOTT OTIS, M.D., Venereal Diseases.
EDWARD CONSTANT SEGUIN, M.D., Diseases of the Mind and Nervous System.
GEORGE MOREWOOD LEEFERTS, M.D., Laryngoscopy and Diseases of the Throat.
WILLIAM TILLINGHAST BULL, M.D., Demonstrator of Anatomy.
GEORGE HENRY FOX, M.D., Diseases of the Skin.
THEOPHILE MITCHELL PRUDDEN, M.D., Director of the Physiological and Pathological Laboratory of the Alumni Association.
ROBERT FULTON WEIR, M.D., Surgery.
WILLIAM STEWART HALSTED, M.D., First Assistant Demonstrator of Anatomy.
FRANCIS HARTMAN MARKOE, M.D., Second Assistant Demonstrator of Anatomy.
GEORGE MONTGOMERY TUTTLE, M.D., Assistant to the Chair of Obstetrics.

The yearly course consists of but one session, of seven months' duration. The seventy-sixth course begins on Monday, October 1, 1883, and lasts until about the 1st of May, 1884.

Teaching by recitation forms a prominent feature of the course, the classes being conducted daily.

The fee for the course is \$40; for any single branch, \$7. A full course counts as time spent with a preceptor.

The fees for the session are the same as at the other large colleges. The dissecting-room is open during the whole course.

Requirements for Graduation.—In the usual statement requiring two full courses, it is specified that the two must not have begun during the same calendar year. Three courses are recommended,—the first including physics

and chemistry, anatomy, and physiology; the second, all the branches taught; the third, materia medica and therapeutics, pathology and practical medicine, surgery, obstetrics, and gynecology. The Faculty state that a majority of the students of the college follow this plan. A regular course in dissection is obligatory. Certificates of preceptorship are not accepted from homœopathic, eclectic, or other "irregular" practitioners, even if they are graduates of regular medical schools.

The examinations are in writing, the personality of the candidate not being known when the decision is given upon his papers.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

During the year the Faculty of this college have met with a serious loss in the death of Prof. Van Buren, who held the chair of surgery. In the spring Dr. Joseph W. Howe resigned his position as clinical professor of surgery. With these exceptions, there have been no noteworthy changes in the teaching corps, which is now constituted as follows:

FACULTY.

ISAAC E. TAYLOR, M.D. (President), Obstetrics and Diseases of Women and Children (Emeritus).
FORDYCE BARKER, M.D., LL.D., Clinical Midwifery and Diseases of Women.
BENJAMIN W. MCCREADY, M.D., Materia Medica and Therapeutics (Emeritus).
AUSTIN FLINT, M.D., LL.D., Principles and Practice of Medicine and Clinical Medicine.
FREDERIC S. DENNIS, M.D., Principles and Practice of Surgery and Clinical Surgery.
LEWIS A. SAYRE, M.D., Orthopædic Surgery and Clinical Surgery.
ALEXANDER B. MOTT, M.D., Clinical and Operative Surgery.
WILLIAM T. LUSK, M.D., Obstetrics and Diseases of Women and Children and Clinical Midwifery.
A. A. SMITH, M.D., Materia Medica and Therapeutics and Clinical Medicine.
AUSTIN FLINT, JR., M.D. (Secretary), Physiology and Physiological Anatomy.
JOSEPH D. BRYANT, M.D., Anatomy and Clinical Surgery and (Associate) Orthopædic Surgery.
R. OGDEN DOREMUS, M.D., LL.D., Chemistry and Toxicology.
EDWARD G. JANEWAY, M.D., Diseases of the Nervous System and Clinical Medicine and (Associate) Principles and Practice of Medicine.

PROFESSORS OF SPECIAL DEPARTMENTS.

HENRY D. NOYES, M.D., Ophthalmology and Otology.
EDWARD L. KEYES, M.D., Cutaneous and Genito-Urinary Diseases.
JOHN P. GRAY, M.D., LL.D., Psychological Medicine and Medical Jurisprudence.
WILLIAM H. WELCH, M.D., Pathological Anatomy and General Pathology, and Demonstrator of Anatomy.
J. LEWIS SMITH, M.D., Clinical Professor of Diseases of Children.
CHARLES A. DOREMUS, M.D., Ph.D., Professor Adjunct to the Chair of Chemistry and Toxicology.
BEVERLEY ROBINSON, M.D., Clinical Professor of Medicine.
FRANCKE H. BOSWORTH, M.D., Diseases of the Throat.

FACULTY FOR THE SPRING SESSION.

FREDERICK A. CASTLE, M.D., Pharmacology.
WILLIAM H. WELCH, M.D., Pathological Histology.
T. HERRING BURCHARD, M.D., Surgical Emergencies.
CHARLES S. BULL, M.D., Ophthalmology and Otology.
LEROY MILTON YALE, M.D., Diseases of the Joints.

The twenty-third regular session began on Wednesday, September 19, 1883, and will extend to the latter part of March, 1884. At its

close, the spring session begins, and lasts until about the middle of June.

Weekly examinations are held by the Faculty. These examinations are for the graduating class only, but all the students are allowed to be present. The examinations are free. In addition, special practical instruction is given to candidates for graduation by practical exercises in medicine, surgery, gynecology, ophthalmology, and otology. These exercises are designed especially for third-course students who have passed their final examinations in the elementary branches. They are extended, however, to all candidates for graduation, so far as practicable without preventing them from attending the didactic lectures.

The usual fees for the winter session are required.

For graduation, candidates must be twenty-one years of age; must have studied three years, after the age of eighteen, with a regular physician or regular physicians in good standing, inclusive of the time spent in attending medical lectures; must have attended two full courses of lectures, the last being in this college; must present certificates of at least one course of dissections at this or some other accredited college empowered to confer the degree of M.D.; must have proper testimonials of character, and must pass a satisfactory examination in each of the seven departments of instruction. Two full courses of lectures are absolutely required, and no period of practice is taken as an equivalent for one course.

Spring Session of Recitations and Lectures.

—The recitations are under the direction of Dr. H. Goldthwaite and Professors Dennis, Welch, and C. A. Doremus. The ticket to the recitations and lectures is \$40.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

Since the opening of the last annual session, Prof. J. W. S. Arnold has retired from the actual duties of the chair of physiology and histology, but retains a connection with the Faculty as professor emeritus of those branches. Professor Stimson succeeds Professor Arnold, and Dr. S. O. Van der Poel has been added to the Faculty as professor of public hygiene. A considerable addition has been made to the building, rendering it now, the Faculty state, the largest of its kind in the country. A dispensary has been added.

FACULTY.

ALFRED C. POST, M.D., LL.D. (President), Clinical Surgery (Emeritus).
CHARLES INSLEE PARDEE, M.D. (Dean) Otology.
J. W. S. ARNOLD, M.D., Physiology and Histology (Emeritus).
JOHN C. DRAPER, M.D., LL.D., Chemistry.
ALFRED L. LOOMIS, M.D., Pathology and Practice of Medicine.
WILLIAM DARLING, M.D., LL.D., F.R.C.S., General and Descriptive Anatomy.

WILLIAM H. THOMSON, M.D., Materia Medica and Therapeutics, and Diseases of the Nervous System.
J. WILLISTON WRIGHT, M.D., Surgery.
WILLIAM M. POLK, M.D., Obstetrics and Diseases of Women and Children.
S. OAKLEY VAN DER POEL, M.D., LL.D., Public Hygiene.
LEWIS A. STIMSON, M.D., Physiology and Histology, Clinical Lecturer on Surgery.
STEPHEN SMITH, M.D., Clinical Surgery.
A. E. MACDONALD, LL.B., M.D., Medical Jurisprudence and Diseases of the Mind.
HERMAN KNAPP, M.D., Ophthalmology.
FANEUIL D. WEISSE, M.D., Practical and Surgical Anatomy.
R. A. WITTHAUS, M.D., Physiological Chemistry.
AMBROSE L. RANNEY, M.D., Curator of Museum.
JOSEPH E. WINTERS, M.D., Demonstrator of Anatomy.

ADJUNCT LECTURERS.

F. R. S. DRAKE, M.D., Practice of Medicine.
N. M. SHAFFER, M.D., Orthopaedic Surgery.
JOSEPH E. WINTERS, M.D., Diseases of Children.
WILLIAM C. JARVIS, M.D., Laryngology.
LAURENCE JOHNSON, M.D., Medical Botany.
P. A. MORROW, M.D., Dermatology.

The preliminary term begins on Wednesday, September 19, 1883, and extends to the beginning of the regular winter course, October 3. The spring session begins at the close of the winter course, in the middle of March, 1884, and continues for ten weeks. Only the winter course is obligatory.

Bedside and Laboratory Instruction.—The graduating class is divided into sections of about twenty-five each, which receive separate instruction for one or two hours daily throughout the term.

The fees for the winter session are the same as at the Bellevue Hospital Medical College.

The requirements for graduation are practically the same as at the other large colleges.

LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, NEW YORK.

The Faculty express the belief that they have succeeded better in practically uniting a medical school with a hospital than any other institution in this country, since all the instruction is given in the hospital building.

FACULTY.

SAMUEL G. ARMOR, M.D., LL.D. (Dean), Principles and Practice of Medicine and Clinical Medicine.
GEORGE W. PLYMPTON, M.D., Physics, Chemistry, and Toxicology.
CORDYON L. FORD, M.D., LL.D., Anatomy.
ALEXANDER J. C. SKENE, M.D., Diseases of Women.
JARVIS S. WIGHT, M.D. (Registrar), Operative and Clinical Surgery.
JOSEPH H. RAYMOND, M.D., Physiology and Sanitary Science.
EDWARD SEAMAN BUNKER, M.D., Histology and General Pathology.
JOHN D. RUSHMORE, M.D., Surgery.
JOHN A. MCCORKLE, M.D., Materia Medica, Therapeutics, and Clinical Medicine.
CHARLES JEWETT, M.D., Obstetrics and Diseases of Children.

The collegiate year is divided into two terms, the preliminary and the regular term. The elementary branches are taught in the former mainly by recitations, the students being divided into three grades. At present the graded course is optional. This preliminary term began September 19, 1883, and the regular term begins January 2, 1884. The annual Commencement takes place May 21, 1884.

Requirements for Graduation.—In addition to the usual requirements, practical anatomy to the extent of having dissected every region of the body, and laboratory courses in chemistry, histology, and pathology. The examination is both oral and in writing. No thesis is required.

Fees.—Yearly matriculation, \$5; preliminary term, \$40; regular term, \$100; demonstrator's ticket, \$5; graduation, \$25; practical chemistry, \$5.

WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.

FACULTY AND INSTRUCTORS.

ELIZABETH BLACKWELL, M.D., Hygiene (Emeritus).
JAMES R. LEAMING, M.D., Principles and Practice of Medicine (Emeritus).
EMILY BLACKWELL, M.D., Obstetrics and Gynecology.
GERARDUS H. WYNKOOP, M.D., Surgery.
MARY PUTNAM JACOBI, M.D., Materia Medica and Therapeutics.
EDWARD H. JANES, M.D., Hygiene.
MARY WATTLES FAUNCE, M.D., Anatomy.
A. R. ROBINSON, M.D., Histology.
C. L. DANA, M.D., Physiology.
HENRY N. HEINEMAN, M.D., Principles and Practice of Medicine.
T. M. CHEESEMAN, JR., M.D., Demonstrator.
S. M. ROBERTS, M.D. (Clinical), Diseases of Children.
D. M. STIMSON, M.D. (Clinical), Surgery.
E. B. BRONSON, M.D. (Clinical), Diseases of the Skin.
A. B. JUDSON, M.D., Lecturer on Orthopædic Surgery.
ELIZABETH M. CUSHIER, M.D., Lecturer Adjunct on Obstetrics.
R. W. AMIDON, M.D., Lecturer Adjunct on Therapeutics.
W. R. BIRDSELL, M.D., Lecturer on Nervous Diseases.
JOSEPHINE CHEVALIER, Lecturer on Chemistry, and Laboratory Instructor.
SARAH J. MCNUTT, M.D., Instructor in Surgery.
MARY T. BISSELL, M.D., Instructor in Physiology.
JOSEPHINE WALTER, M.D., Instructor in Practice.
GRACE PECKHAM, M.D., Instructor in Obstetrics.

The college year consists of a session of eight months, beginning on the 1st of October and ending with the last day in May.

A preliminary examination is required of applicants who do not show a certificate from a literary institution. Students must attend three entire sessions, graded as follows: *first year*, anatomy, chemistry, physiology, materia medica, and practical work in the anatomical rooms and chemical laboratory; *second year*, the same, also histology, obstetrics, surgery, practice, therapeutics, and hygiene; *third year*, the latter departments continued, and practical medical work under the direction of the teachers, with clinical reports of cases attended. Students desiring to take a four-years course will confer with the secretary on matriculating, and be instructed how to proceed.

Requirements for Graduation.—Three winter sessions of lectures, with clinical instruction according to the course laid down; satisfactory examinations before the Faculty and Board of Examiners.

Fees.—Matriculation, \$5; demonstrator's ticket, \$10; professors' tickets, each \$15,—\$105; graduation, \$30.

NEW YORK POLYCLINIC.

The second year of the New York Polyclinic finds it in a flourishing condition. It is

like the preceding school in its essential features, except that didactic lectures form no part of the plan of instruction, as the school was organized with the special view of teaching only clinical medicine and surgery to physicians. The numbers in the various classes are limited, so that each can have an opportunity for personal investigation of patients. The Polyclinic is open all the year, each special course extending over six weeks. The fees are about the same as those of the Post-Graduate Medical School. The Faculty is as follows:

FACULTY.

JAMES R. LEAMING, M.D., Professor of Diseases of the Chest, President of the Faculty.
E. DARWIN HUDSON, JR., M.D., Professor of General Medicine.
JOHN H. RIPLEY, M.D., Professor of Diseases of Children.
LOUIS ELSBERG, M.D., Professor of Laryngology and Rhinology.
LONDON CARTER GRAY, M.D., Professor of Diseases of the Mind and Nervous System, and Electro-Therapy.
RICHARD C. BRANDIS, M.D., Professor of Laryngology, Rhinology, and Otology.
ANDREW R. ROBINSON, M.D., Professor of Dermatology.
EDWARD B. BRONSON, M.D., Professor of Dermatology.
JOHN A. WYETH, M.D., Professor of General and Genito-Urinary Surgery.
A. G. GERSTER, M.D., Professor of General and Genito-Urinary Surgery.
PAUL F. MUNDÉ, M.D., Professor of Gynecology.
W. GILL WYLIE, M.D., Professor of Gynecology.
JAMES B. HUNTER, M.D., Professor of Gynecology.
EMIL GRUENING, M.D., Professor of Ophthalmology.
DAVID WEBSTER, M.D., Professor of Ophthalmology.
V. P. GIBNEY, M.D., Professor of Orthopædic Surgery.
WALTER R. GILLETTE, M.D., Professor of Obstetrics.
GEORGE B. FOWLER, M.D., Instructor in Physiological Chemistry.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

This was the first institution of its kind in New York City, and was organized in June, 1882, the plan of instruction being based upon the post-graduate methods which have been successfully employed for many years in the medical centres of Europe. Clinical instruction constitutes a fundamental feature of the school. Systematic or didactic teaching holds a subordinate position. No under-graduates are admitted.

The curriculum embraces a regular and an intermediate term. The regular term began October 1, 1883, and will continue until June 2, 1884. The other term is intermediate, and will continue until October 6, 1884. Each course continues seven weeks, and a single one or any number may be taken. The fees for individual courses run from ten to twenty-five dollars each. No matriculation fee is required, and no degrees are conferred.

The Faculty is as follows:

FACULTY.

JAMES L. LITTLE, M.D., Professor of Clinical and Operative Surgery.
WILLIAM A. HAMMOND, M.D., Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity.
D. B. ST. JOHN ROOSA, M.D., LL.D., Professor of the Diseases of the Eye and Ear.
FREDERIC R. STURGIS, M.D., Professor of the Diseases of the Skin and Genito-Urinary Organs, and of Venereal Diseases.

CLINTON WAGNER, M.D., Professor of the Diseases of the Nose and Throat.
 THOMAS E. SATTERTHWAITE, M.D., Professor of Pathology and General Medicine.
 MARY PUTNAM JACOB, M.D., Professor of the Diseases of Children.
 BENJAMIN F. DAWSON, M.D., Professor of the Diseases of Women.
 EDWARD C. SPITZKA, M.D., Professor of the Anatomy and Physiology of the Nervous System.
 M. JOSIAH ROBERTS, M.D., Professor of Orthopædic Surgery and Mechanical Therapeutics.
 EDWARD L. PARTRIDGE, M.D., Professor of Obstetrics.
 CHARLES L. DANA, M.D., Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity.
 ALEXANDER J. C. SKENE, M.D., Professor of the Diseases of Women.
 ANDREW H. SMITH, M.D., Professor of Clinical Medicine and Therapeutics.

Our correspondent states further, concerning medical education in New York, that, in addition to the information to be obtained from the regular announcement of the medical colleges just given, it may safely be said that there exists a general sentiment in the profession that a license to practise should be required, and the standard of graduation certainly be elevated. This object can be obtained only by adopting one or more of three methods,—viz., first, by establishing a preliminary examination, to pass which will require on the part of the prospective medical student an evidence of a certain degree of mental training and of general education; second, by lengthening the term of the medical course, and adding to the requirements for graduation; third, by additional facilities for learning and improved methods of instruction.

While the medical colleges, as well as the profession in general, seem to appreciate the need for higher medical education, any means that may be suggested for attaining to this will necessarily meet with greater or less opposition. A college which draws most of its students from the larger cities, where a collegiate education is more usual, would be more likely to favor a strict preliminary examination, and demand a higher degree of proficiency in general education, than one which receives the majority of its recruits from the West and South and rural districts, where the standard of general education is lower. The matter of extending the time of study and attendance upon lectures seems to meet with general approval, but the college which takes the first step in this direction will probably do so at the expense of a diminished number of students at its halls, as was proved not long ago by the Bellevue Hospital Medical College, which, for this reason, has returned to its former requirements of only two years' attendance and one under a preceptor. Should all the medical colleges throughout the country determine upon a three years' course simultaneously, doubtless the New York colleges would heartily join in the move. Later a four years' course might possibly be adopted. It would probably prove some time before the step would be taken, based upon a demand therefor on the part of the majority of those

just entering upon their medical studies. Some years will probably pass by before a call for a preliminary collegiate education, especially instruction in the dead languages, as a requisite in entering upon the study of medicine, will meet with much favor, at least with a sufficient amount of favor to lead to its general adoption. The learning to be acquired at a well-regulated and well-founded medical college is so varied and so practical that even a large number of the general profession, as well as the college professors, seem to think that it sufficiently replaces any want not met by our excellent public schools. The colleges here certainly have all the main essentials for giving their students an excellent theoretical and practical medical education, and their greatest deficiency at present is an inability to make a three or four years' course compulsory. The opportunities for clinical, post-mortem, dissection, pathological, histological, and general laboratory instruction are very good. One feature introduced into the University last year seems to be propitiatory of excellent results,—viz., the dividing of the graduating class into sections, and giving separate instruction at the bedside in the hospital for one or two hours daily. Laboratory instruction is also made a special feature at this college. The classes at the three colleges have opened with about their usual fullness. From the Catalogue for 1883, the number of students at the College of Physicians and Surgeons was 543; the number of graduates, 125. Number in attendance at the University, 528; graduates, 163. Number in attendance at Bellevue, 467; graduates, 167. Of course, the percentage of rejections at the examination for the title of "M.D." cannot be exactly estimated from these figures, but it would seem that the requirements were not of a uniform standard, or else that the training was not equally perfect.

A graded course is optional, and usually is recommended, but it will not at all be likely to be made obligatory until the term shall have been lengthened. It seems to be regarded as of much less importance than the lengthening of the term.

The general sentiment of the medical profession in this city, and, so far as can be judged, throughout the State, is doubtless in favor of placing the power of granting a license to practise in the State in the hands of a State board of examiners; but as to the practicability of it, probably the most ardent supporters of such a project would admit that there is some doubt. The difficulty of keeping out politics, of maintaining harmony among the exclusive sects, etc., all constitute difficulties in the way of such a movement. The medical colleges would, no doubt, consider themselves fully as able to judge of their students' proficiency as any medical examining board, however constituted.

Whatever may be considered the best

means of bringing it about, whether by one sort of medical politics or another, whether by one code of ethics or another, or by no code, the times certainly point to a desire for a higher standard of medical education in the city and and State of New York.

MEDICAL EDUCATION IN BALTIMORE.

IN the matter of medical education, Baltimore has made great progress during the past decade, not only in the number of colleges which have been organized and in the number of students attending the lectures given in them, but also in the higher standard of requirements insisted upon as qualifications for graduation. Several factors are concerned in the production of this desirable condition of things. In the first place, the general sentiment in favor of a more thorough education has had its effect; secondly, the honorable rivalry between the two leading schools has had a reciprocal effect in stimulating each to do its best in the endeavor to gain the lead over the other; and, finally, perhaps the largest share of this good effect is to be attributed to the influence of the Johns Hopkins University, our young but already renowned institution of learning.

JOHNS HOPKINS UNIVERSITY.

As the Johns Hopkins University promises to occupy a large share in the movement towards attaining the *highest* standard of medical as well as other education in this country, it will be appropriate to give an account of what is proposed to be done by this institution in furtherance of this object.

Seven years ago, Dr. John S. Billings, of the United States Army, delivered a course of lectures on the "History of Medicine" before the University, at the close of which he gave an outline of the requirements which probably would be demanded of those who sought the degree of M.D. in her halls. Three years ago, the first beginning was made towards the realization of the plan sketched by Dr. Billings, in the establishment of a special course preparatory to the professional study of medicine. This course comprises three years' study in certain branches of knowledge which most medical schools in this country seem to consider as non-existent, or, at least, of little benefit to the medical student. The candidate for this preparatory course is required to pass a preliminary examination in arithmetic, algebra to simple equations, involving not more than two unknown quantities, geometry, first three books of Euclid, or equivalent, plane trigonometry, and the use of logarithms. He will also be examined in easy Latin (Cæsar and Virgil) and the elements of Latin grammar. A knowledge of the mother tongue, so much neglected generally, will also be required, and a satisfactory test in spell-

ing, punctuation, and syntax must be passed. French, German, and drawing are also desirable, but not necessary at the preliminary. An exact, if not very extensive, knowledge of physical geography will be required of all candidates. After entrance the student will receive instruction in physics, chemistry, biology, English, German, and French, physical geography, history, logic, ethics, and psychology, with laboratory exercises in the first three subjects mentioned. The course on biology includes morphology, histology, physiology, human and comparative anatomy, and marine laboratory work. At the end of this course (three years), the student, if successful in his examinations, receives the degree of B.A. and is considered fitted to begin the study of medicine proper. This, according to Dr. Billings's schedule (whether this will be modified or not I am not aware), is to occupy a further four years, in the study of professional subjects proper, three of which are to be spent in practical work in the hospital, the doctor's laboratory. After these seven years' study, and several examinations in the mean while, the candidate may finally hope to append M.D. (Balt.) after his name, if his examinations in the various subjects prove satisfactory.

The fees for the course preparatory to the study of medicine are eighty dollars per year, to be paid in two instalments,—October and February. Twenty dollars must, in addition, be paid in the chemical and biological laboratories, for material and the use of apparatus.

The question may justly be asked, "Will many avail themselves of such opportunities?" As regular candidates for a degree, I fear not. Even Dr. Billings thought that the Johns Hopkins Medical School, in spite of its munificent endowment, would probably never graduate a class of more than twenty-five at a time. At present even this seems a sanguine view to take of it, for only very few students are taking the medical preparatory course in its entirety.

No account of the medical advantages of the Johns Hopkins School would be complete, however, without a reference to the magnificent hospital which is now in progress of building. As is probably known to all the readers of these pages, the late Mr. Hopkins, in making provision for the university which was to bear his name, directed that three and a half million dollars should be appropriated out of his estate for the construction of a charity hospital. The trustees have determined that in the essential requisites of a hospital this should be a model institution, and, as far as I am able to judge, this object will be attained. One of the common wards is now nearly completed, and an examination of it creates a strong desire to see the whole establishment finished at an early day. It will probably still be several years before the hospital is open for the reception of pa-

tients, though it is possible the year after next may see the opening of part of it.

Professor H. Newell Martin, the University professor of biology, has been appointed professor of physiology in the medical school, and Professor Ira Remsen, who occupies the chair of chemistry in the University, will teach the same branch to the medical students. Dr. Billings was tendered the chair of hygiene, but was compelled to decline on account of his absorbing duties in connection with the National Medical Library. It is said, however, that he will deliver a course of lectures on public hygiene before the University during the coming winter.

The indications seem to be that the diploma of M.D. from the Johns Hopkins University will indicate an amount of thorough professional knowledge approached by no similar institution in this country, and exceeded by none anywhere.

I am reminded, however, that however rapidly this good time may be coming, it has not yet arrived. The average medical student is still wanting in many of the graces of a polite education, and in not a few of the accomplishments actually requisite to study his text-books or listen to his lecturers with the greatest amount of profit. This brings me back to those institutions which are in our midst for the instruction of students in medicine alone, and which do not aim at the high standard of the Johns Hopkins, but modestly desire to turn out doctors who are able to diagnose a case of typhoid fever from one of pneumonia (and I'm sure this isn't always the easiest thing to do), and who know how to treat the case when the diagnosis is made.

UNIVERSITY OF MARYLAND.

Our oldest established medical school is the University of Maryland, which is now in its seventy-seventh session. Most of the physicians in this city are graduates of the University, and regard their old alma mater with much affection. Sometimes it has seemed to me that this worship was carried to excess, for many of the alumni are such bitter partisans that they are unable or unwilling to admit that any one can be a safe, reliable, or honest practitioner unless his credentials are derived from the *Academia Terra Mariae*. During the last few years the Faculty has been rejuvenated by the infusion of a quantity of healthy young blood, and it is now in pretty good condition, with the weak points carefully guarded by an energetic reserve, which will preserve it against dangers hereafter. In 1881 the University obtained power from the Legislature to add departments of dentistry and pharmacy. The dental department was established last year, its principal strength being derived from the old Baltimore College of Dental Surgery, whose Dean seceded to the University and assumed charge of the dental department of that school.

The clinical instruction at the University is good, the lecturers being progressive men and excellent teachers. The Faculty has control of a large general hospital and outdoor service, from which the clinical material is drawn.

The Faculty is composed of Professors George W. Miltenberger, Obstetrics; Richard M. Sherry, Principles and Practice of Medicine; Samuel C. Chew, *Materia Medica*, Therapeutics, and Throat and Chest Diseases; Frank Donaldson, Clinics on Throat and Chest; Wm. T. Howard, Diseases of Women and Children, and Clinical Medicine; J. J. Chisolm, Eye and Ear; Francis T. Miles, Physiology and Diseases of Nervous System; L. McLane Tiffany, Surgery; J. E. Michael, Anatomy and Clinical Surgery; I. E. Atkinson, Pathology and Clinical Dermatology; F. J. S. Gorgas, Principles of Dentistry, Dental Surgery, and Mechanism; J. H. Harris, Operative and Clinical Dentistry; Randolph Winslow, Demonstrator of Anatomy. Prof. Aiken, for about two generations Professor of Chemistry, has resigned, and his place has been temporarily filled by the appointment of Dr. R. Dorsey Coale, a graduate and associate of the Johns Hopkins University, as Lecturer on Chemistry. Prof. Tiffany is Dean of the medical and Prof. Gorgas of the dental department. The department of pharmacy has not yet been organized.

The requirements for graduation are—three years of study, two full courses of lectures, (three recommended), twenty-one years of age, a thesis or clinical report of cases. Fees—\$120 for the lecture tickets, \$5 for matriculation, \$10 for demonstrator's ticket. For beneficiary students the ticket to all the lectures is \$50. The graduation fee is \$30.

THE COLLEGE OF PHYSICIANS AND SURGEONS.

The College of Physicians and Surgeons, an offspring and successor to the Washington University, was organized in 1872, and is now the most prosperous school in the city. The elements of weakness that at first existed in the Faculty have been gradually weeded out, new facilities have been added, and few schools are better qualified to give thoroughly practical instruction to their students. The Faculty owns a large general hospital, a lying-in asylum endowed by the State, a woman's hospital near the college and rendering its material available for public clinics, and a large dispensary service. Physiological and chemical laboratories have been established, and, beginning with the present session, practical work in the laboratories will be an essential prerequisite to graduation. The school is fortunate in having for its Dean one of the most energetic and clever businessmen in the profession here, and it is largely owing to his untiring industry and tact that the school has attained to its present success. The Faculty is composed for the most part of

active, earnest, and thorough teachers. Their names are—Professors Thomas Opie, Obstetrics and Puerperal Diseases; John S. Lynch, Principles and Practice of Medicine, and Throat and Chest Diseases; T. S. Latimer, Physiology and Diseases of Children; A. F. Erich, Diseases of Women; A. Friedenwald, Eye and Ear; C. F. Bevan, Anatomy, Genito-Urinary and Orthopædic Surgery; Oscar J. Coskery, Surgery; A. B. Arnold, Clinical Medicine and Diseases of Nervous System; Richard Gundry, *Materia Medica*, Therapeutics, and Mental Diseases; William Simon, Chemistry; George H. Rohé, Hygiene and Clinical Dermatology. The demonstrators are Drs. J. W. Chambers and J. H. Branham, of Anatomy, and W. D. Booker and H. J. Berkeley, of Physiology. Prof. Opie is the Dean.

The requirements for graduation are—three years' medical study, two full courses of lectures (three recommended), dissection during both terms, practical work in chemical and physiological laboratories. No thesis is demanded. The tickets of those schools holding their regular session in summer are not accepted at this school as equivalent to attendance on a full course of lectures. The full fees for the course are \$120. Privileged students—*i.e.*, beneficiaries—are admitted on payment of \$55. The graduation fee is \$30.

WOMAN'S MEDICAL COLLEGE.

Last year a number of progressive young men, recognizing the importance of offering to women an opportunity to study medicine, and place the gentle sex here on an equal footing with their sisters in Philadelphia, New York, and Chicago, organized the Woman's Medical College of Baltimore. The success of the college has exceeded the anticipations of the organizers, and demonstrated the correctness of their belief that the movement started by them met an unquestionable demand. A hospital and dispensary are connected with the college, and the institution is honorably striving for the success it deserves. The Faculty is fairly well qualified for its work, and consists of Professors John S. Lynch, Principles and Practice of Medicine; B. B. Browne, Diseases of Women; T. A. Ashby, Obstetrics; Randolph Winslow, Surgery; E. F. Cordell, *Materia Medica* and Therapeutics; W. D. Booker, Physiology and Diseases of Children; R. H. Thomas, Throat and Chest Diseases; John G. Jay, Anatomy and Operative Surgery; Cameron Piggot, Lecturer on Chemistry; and Thomas P. McCormick, Demonstrator of Anatomy. Professor Booker is Dean.

The requirements are—a preliminary examination in the ordinary branches of an English common-school education, attendance on two full courses of lectures (three recommended), and on clinics and dissections. Fees, \$75 for full course of lectures. Matriculation, \$5. Dissection, \$10. Graduation, \$30.

BALTIMORE MEDICAL COLLEGE.

No notice of medical education in Baltimore would be complete without at least a passing reference to a peculiar aberration of the teaching instinct which resulted two years ago in the organization of what in its prospectus is termed the Baltimore Medical College, but which is generally spoken of by the profession as the "Christian College." The feature in the charter of this college which caused most comment was the provision that all the professors in the institution should likewise be professors of Christianity. At the introductory exercises of the present year the President is reported to have said that the "establishment of a pulpit is in contemplation,"—whatever that may mean. During the first two sessions the lectures were delivered to a class of men, women, and preachers. At present the women are excluded from the benefits of the teaching, and the vague reference to the pulpit, above mentioned, seems to indicate that the preachers will enjoy a monopoly of the instruction at an early day. This school, we believe, has not succeeded in winning the confidence of the profession of this city, as the controlling elements in its administration are not such as to inspire us with confidence in its reliability. The State Board of Health of West Virginia refuses to recognize its diplomas, and the Illinois State Board will probably take similar action when it shall be called upon for a decision.

The climatic and social conditions of Baltimore render it an attractive place for students to pass their period of pupilage. Board and lodging can be obtained at from three to six dollars per week. At the latter figure the accommodations are quite good,—better, in my experience, than in any other large city in the country.

Allow me to add a single suggestion. Baltimore is a bad place to begin practice. According to the census, there are more physicians to population in Maryland than in any other State in the Union.

MEDICAL EDUCATION IN BOSTON.

HARVARD UNIVERSITY, MEDICAL DEPARTMENT.

THE advance of medical education in America, and the opportunities for acquiring a thorough training for after-practice, are nowhere better illustrated than at the medical school of Harvard University. Each year, for the past decade, has seen some improvement. Acting upon the idea that preliminary training is necessary, the entrance-examination was instituted, which at first caused a diminution of students, only to result in increasing their number and quality year by year. The school this session begins its hundred-and-first year, with lectures in its

new building, erected entirely by the contributions of its friends, at a cost of three hundred thousand dollars. The building is centrally situated, in that section of Boston destined to remain the educational centre for years to come, having for its neighbors the Massachusetts Institute of Technology, the Museums of Fine Arts and Natural History, while close adjoining is the land recently given the city by the State for the purpose of a public library.

The building is central in respect to its clinical departments, being equidistant from the Massachusetts General, City, Children's, Free Women's Hospitals, and Boston Dispensary.

The students can find rooms, at moderate price, within easy walking-distance of the school.

The building itself is of plain brick, with sandstone trimmings, occupying one hundred and twenty-two feet on Boylston Street, ninety on Exeter Street. Its interior arrangements will be a source of great interest to medical men. Its facilities for thorough, careful observation in laboratory-work are unsurpassed in this country. As one enters the building, he is struck by the excellence of its architecture: it is that of a central hall, lighted from above, containing the stairway; about this rooms are arranged. On the left, as one enters, is the janitor's room, where letters and bundles for the students are received and arranged so that they will easily attract the attention. Continuing towards the rear of the building, one passes through an entry to a large, sunny room provided with desks and chairs, for the use of students as a reading-room; opening from this is a smoking-room, where conversation and smoking are allowed, thus, in its very foundation, providing for the comfort of the student. The remainder of the ground-floor is devoted to the library and room for the Faculty.

The second floor is devoted entirely to the physiological and chemical laboratories, and here provision has been made for students of advanced standing and those desiring an experimental knowledge of these subjects. Adjacent to the laboratories are the lecture-rooms for those subjects.

The third floor is given up to the lecture-rooms for anatomy and surgery. The seats are arranged on the plan of an amphitheatre, thus affording each person an unobstructed view. Here also is the Warren Museum, containing over seven thousand valuable specimens, to which the student has access, and on the west side two large, general lecture-rooms, where those topics not requiring demonstration are to be given.

On the fourth floor are the entrances to the amphitheatre for the student. Passing to the front of the building, one enters the pathological laboratory. Here provision is made for microscope-work, the room being well lighted from above and sides. In the

southeast corner of this floor is a small amphitheatre, to be used for operative courses on surgery and obstetrics, giving opportunities for special demonstration. In front of this, occupying the western side of the fourth floor, is the room for practical anatomy. This is well supplied with direct light by means of large sky-lights.

Having examined the building, what is necessary that one may use it as a student? The catalogue says,—

All candidates for admission, excepting those who have passed an examination for admission to Harvard College, must present a degree in Letters or Science from a recognized college or scientific school, or pass an examination, on the Monday preceding the last Wednesday in June or September, at 10 A.M., in the following subjects:

1. **ENGLISH.** Every candidate shall be required to write, legibly and correctly, an English composition of not less than two hundred words, and also to write English prose from dictation.

2. **LATIN.** The translation of easy Latin prose.

3. **PHYSICS.** A competent knowledge of Physics (such as may be obtained from Balfour Stewart's Elements of Physics).

4. **ELECTIVE SUBJECT.** Each candidate shall pass an approved examination in such one of the following branches as he may elect: French, German, the Elements of Algebra or of Plane Geometry, Botany.

Whenever the candidate shall give evidence of having passed a satisfactory examination in any of the above requirements either at Harvard College or at the Lawrence Scientific School, a subsequent examination in such subjects will not be demanded for his admission to the Medical School.

The examinations will be conducted in writing, and specimens of the papers used will be sent on application to the Secretary. In judging the work of the candidate, the spelling, grammar, and construction will be considered.

Graduates in medicine will not be required to pass this examination on joining the school.

No student becomes a member of the school until he has registered his name with the Secretary of the Faculty.

Having satisfied ourselves of our ability to enter, who are to be our instructors if we conclude to be instructed by them? The two senior members of the Faculty until recently, Drs. Ellis and O. W. Holmes, have passed from active medical teaching. The Faculty that now is, comprises the following members:

FACULTY.

CHARLES W. ELIOT, LL.D., President.

CALVIN ELLIS, M.D., Emeritus Professor of Clinical Medicine.

OLIVER W. HOLMES, M.D., LL.D., Emeritus Professor of Anatomy.

HENRY J. BIGELOW, M.D., Emeritus Professor of Surgery.

FRANCIS MINOT, M.D., Hersey Professor of the Theory and Practice of Physics.

JOHN P. REYNOLDS, M.D., Professor of Obstetrics.

HENRY W. WILLIAMS, M.D., Professor of Ophthalmology.

DAVID W. CHEEVER, M.D., Professor of Surgery.

JAMES C. WHITE, M.D., Professor of Dermatology.

ROBERT T. EDES, M.D., Professor of Materia Medica.

HENRY P. BOWDITCH, M.D., Professor of Physiology, Dean.

CHARLES F. FOLSOM, M.D., Assistant Professor of Mental Diseases.

FREDERICK I. KNIGHT, M.D., Assistant Professor of Laryngology.

CHARLES B. PORTER, M.D., Assistant Professor in Surgery.

J. COLLINS WARREN, M.D., Assistant Professor in Surgery.

REGINALD H. FITZ, M.D., Shattuck Professor of Pathological Anatomy.

WILLIAM L. RICHARDSON, M.D., Assistant Professor of Obstetrics.

THOMAS DWIGHT, M.D., Parkman Professor of Anatomy.

EDWARD S. WOOD, M.D., Professor of Chemistry.

WILLIAM H. BAKER, M.D., Assistant Professor of Gynecology.

WILLIAM B. HILLS, M.D., Instructor in Chemistry.

WILLIAM F. WHITNEY, M.D., Curator of the Anatomical Museum.

The course of instruction is arranged for three or four years, according as the student may elect, the Faculty strongly urging all those who can possibly do so to take the four-years course, having in view a prescribed course of four years. One who has been through a three-years course can readily see what an advantage it would be to be able to fill out in his fourth year those subjects which, from necessity, he was obliged to slight when the course was only three years. The amount of knowledge attempted in the third year is more than any student can digest: to persuade more students to remain four years is the present aim of the Faculty, and with this end in view a watchful care is kept that everything may be so provided as to induce to prolonged study and individual research, so that the fourth year shall be so attractive and evidently useful that students will desire to remain in the school from a conviction of advantages gained.

With this end in view, then, the course has been divided as follows:

FOUR-YEARS COURSE.

For the First Year.—Anatomy, Physiology, and General Chemistry.

For the Second Year.—Practical and Topographical Anatomy, Medical Chemistry, *Materia Medica*, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery.

For the Third Year.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

For the Fourth Year.—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Forensic Medicine.

THREE-YEARS COURSE.

For the First Year.—Anatomy, Physiology, and General Chemistry.

For the Second Year.—Practical and Topographical Anatomy, Medical Chemistry, *Materia Medica*, Pathological Anatomy, Clinical Medicine, and Clinical Surgery.

For the Third Year.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Forensic Medicine.

HOSPITAL ADVANTAGES.

Besides these regular courses, special provision is made for the post-graduate course, in which the chances for clinical work are abundant.

The clinical advantages are such as are found only in large cities: to all the hospitals, both for clinical visits and to witness operations, the student has every opportunity.

At the Massachusetts General Hospital, nearly three thousand in its wards and twenty thousand in its out-patient department annually give excellent opportunity for that practical knowledge of disease which is so essential for the young physician. At the City Hospital, where four or five thousand are treated annually in its wards and twelve thousand in its out-patient department, ample opportunity is given for observing acute and contagious diseases: in the surgical wards,

recent injuries, fractures, and traumatic cases are of daily occurrence.

Operative surgery is to be seen at each hospital once a week, and, during a portion of the year, twice a week.

At the Massachusetts Charitable Eye and Ear Infirmary a large number of cases are treated each year, to all of which the student has access.

At the Boston Dispensary the number of patients is nearly twenty-seven thousand yearly, and here the student has an amount of auscultation and physical examination more than enough. All the physicians connected with the institution offer every courtesy to the student.

In the wards of this hospital, devoted exclusively to gynecological cases, the student has the opportunity of seeing the various forms of uterine disease.

At the Massachusetts Hospital, which has so many varied surgical operations, the City Hospital, with its acute cases and accidents, the out-patient departments of both hospitals, with their opportunities for physical examination, the Hospital for Women, giving to those sufficiently advanced access for the study of gynecology, the student has abundant illustration for his text-books.

CHICAGO.

ALMOST every Western town of any importance has its medical college. This city begins to count them by the dozen, and, if one may judge by the increasing numbers of young men in attendance each year, all appear to thrive. Indeed, medicine is now one of the easiest of the professions, and many hating hard work, mental or physical, purchase the right to a seat in the college lecture-room, and go through. With the closing days of last month our colleges renewed their activity: the attendance is larger than ever before, with the exception of one school, which shows a slight falling off. Each Faculty vies with the other in seeking favors, and promises increased facilities to patrons.

It is becoming fashionable in this city to advertise the operator and operations in surgery. Some invite the newspaper reporter to be present, others see to it that the paper is supplied with an entirely technical report of the case, and others go so far as to secure an announcement in advance, to be followed by an exhaustive description of the operation, in which the usual statements are made to the effect that the operation has been performed but twice before, and never till this time in this country. They usually close with the assurance that the operator and the patient are doing well.

Last week the popular mind was considerably agitated in this manner over the ligation of the common carotid.

The question of what shall be done with the city sewage is now pressing itself upon the attention of the authorities. That the present sewerage system is of a most imperfect and inadequate character is felt by all who have given the matter any serious consideration. The sewerage and the health of the city are so intimately connected that neglect of one is a sacrifice of the other. Our city does not profit by the experience of other cities; it does not begin where others left off, but begins where they began, and so gropes along, picking up a little sound knowledge at wide intervals and at great expense. The vast amount of filth flowing through the sewers into the lake, from whence we draw our water-supply, is with each year becoming a source of greater anxiety. There is a probability that we may adopt a slight modification of the system now in use in Paris, necessitating the purchase of about fifteen hundred acres of land not far from the city limits, or a system of intercepting sewers may be constructed by which the sewage would be passed rapidly through the canal and Illinois River to the Mississippi. In this connection it may be mentioned that the open grating placed over the man-holes to the sewers has in more than one instance been a direct source of disease to children and persons residing in the immediate vicinity. When the wind prevails from certain directions, the amount of gas escaping from those gratings is such as to compel residents near by to close windows and doors to shut out the stench. In some families it has produced nausea and vomiting and obscure and intractable disease.

On the evening of the 6th instant the Hahnemann Hospital was visited by fire, destroying the front portion, a building about forty by sixty-five feet. The excitement among the patients and officers ran high, but all escaped injury, and the fire was extinguished, saving the rear and principal part of the institution. The damage amounted to about ten thousand dollars, the building alone being insured. The loss will be considerable.

Dr. Jewell has resigned the professorship of nervous diseases in Chicago Medical College, and has been succeeded by Dr. Hay, late of Dubuque, Iowa.

CHICAGO, October 10, 1883.

CLEVELAND, OHIO.

[Our correspondent sends details about the colleges, which want of space prevents us from publishing. He gives his opinion of medical matters in this city as follows.—Ed. M. T.]

THERE are two regular medical colleges in Cleveland now in operation. The clinical advantages of each school are about the same, the Charity and City Hospitals being open to the students from each.

About two years ago, one of Cleveland's wealthy citizens proposed to the Faculty of each school that if they would unite and

form one, to be known as the "Western Reserve University Medical Department," he would give a considerable sum of money towards the erection of a fine college building. The offer was accepted, but in making up the Faculty Drs. Weber, Parker, Lowman, and Miller only were elected,—probably the ablest members of the Wooster school. The remaining ones felt so slighted at being left out in the cold, as it were, that they set about reorganizing a Faculty, being encouraged in such a step by the "University of Wooster," which institution claimed to have known nothing about their medical department consolidating with any other,—in fact, that the motto, "Non Anno sed Annis," inscribed over their portal, was just what they meant. As the matter stands, the Western Reserve medical department has the best Faculty and the largest number of students.

PROCEEDINGS OF SOCIETIES.

AMERICAN ACADEMY OF MEDICINE.

(Special report for the MEDICAL TIMES.)

THE Eighth Annual Meeting of the American Academy of Medicine was held in New York, at the New York Academy of Medicine, on Tuesday and Wednesday, October 9 and 10, 1883. The first session, on Tuesday afternoon, was called to order by the President, Dr. H. O. Marcy, of Boston, and prayer offered by Dr. Traill Green, of Easton. After the reading of the minutes of the meeting at Philadelphia last year, and the report of the Council, the Academy went into an election for Fellows. The following-named applicants, having been approved by the Council and by them recommended, were elected Fellows of the Academy: Dr. Z. B. Adams, Framingham, Mass.; Dr. E. B. Bronson, New York, N.Y.; Dr. A. Brown, Hellertown, Pa.; Dr. W. T. Clull, Schenectady, N.Y.; Dr. J. Corbin, Brooklyn, N.Y.; Dr. C. H. Crane, Surgeon-General, U.S.A., Washington, D.C.; Dr. F. L. Du Bois, Bridgeton, N.J.; Dr. E. L. Dunster, Ann Arbor, Mich.; Dr. J. Emerson, Detroit, Mich.; Dr. P. J. Farnsworth, Clinton, Iowa; Dr. F. H. Gerish, Portland, Me.; Dr. A. L. Gihon, Medical Director, U.S.N., Washington, D.C.; Dr. John Green, St. Louis, Mo.; Dr. E. Hartshorn, Philadelphia, Pa.; Dr. A. C. Kemper, Cincinnati, O.; Dr. R. P. Lincoln, New York, N.Y.; Dr. E. F. Mordough, Brooklyn, N.Y.; Dr. J. H. Patzki, U.S.A., St. Augustine, Fla.; Dr. Thomas J. Smith, Bridgeton, N.J.; Dr. J. A. Stewart, Baltimore, Md.; Dr. E. V. Stoddard, Rochester, N.Y.; Dr. J. K. Weaver, Norristown, Pa.; Dr. L. P. Walton, New York, N.Y.

Drs. T. Green, Steiner, and Birmingham were appointed as the nominating committee.

Dr. A. D. Rockwell, of New York, read a biographical sketch of his late associate, Dr. G. M. Beard, who, at the last meeting, was elected First Vice-President of the Academy. Dr. Rockwell entered more upon the inner life of his subject than his outward actions, trying to show what he *was* rather than what he did. Dr. Beard was a man of intense personality and self-reliance, amounting, in the minds of some, to excessive egotism. He was withal a courteous man, always ready to drop his work and listen to the conversation of others, whatever its worth. Perhaps the most striking characteristic was his humor, and out of this grew his reputation for eccentricity. A kindly disposition, full of tolerance and sympathy, avoiding polemics, who "never argued, but simply stated," containing so much that differed from other men that he was apt to be misjudged, but judged aright he was "an interesting, unique, and lovable personality." This memorial was ordered to be entered upon the minutes of the Academy.

Dr. Traill Green, of Easton, read a paper on "*The Imperfection of Technical Studies as a Means of Mental Culture.*" The central thought of this paper was that a man ought to know his tools and how to use them before the practical application of them to his life-work. When the natural sciences were born, physicians were true to their training, and assisted. If the study of the sciences be the *only* way to produce educated men, true education is of a very recent date, and all the worthies of a past age in philosophy and mathematics, in law and theology and medicine, were without a true education. The schools of technology are beginning to recognize the need of a general preparatory culture before entering upon technical studies, asserting that they are post-graduate schools. Allusion was made to the address of Charles Francis Adams, Jr., and quotations made, showing that false deductions had been drawn from it, and the necessity for a full and rounded development of the faculties as a preliminary to professional study was claimed to exist.

Dr. Benjamin Lee, of Philadelphia, read the next paper, having the title "*The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine.*" The paper consisted, first, of an historical study of the earlier botanists of the country, many of them being connected with the medical department of the University of Pennsylvania. Reference was made to the bibliography of American medical botany, the value of our native vegetable *materia medica* alluded to, and the almost utter ignorance of it on the part of physicians, leaving its development almost entirely to manufacturing pharmacists. There is an admirable opportunity given to country practitioners to study the indigenous vegetable *materia medica*, which is generally neglected because of ignorance. This study, if

not begun during student life, will probably be neglected afterwards. The action of the Medical Society of the State of Pennsylvania, in placing botany among the subjects of preliminary education, was noticed with approbation.

"*Is it Fair?*" was the rather fanciful title of a paper by Dr. Charles McIntire, Jr., of Easton. The sub-title explained that it was "A Study of the Comparative Political Position of the United States." Assuming that theology, law, and medicine were all of them learned professions, one would judge that equal legal protection would be given them; but examination shows that this is not so: that while the rule requires a special examination of the members of the other professions apart from their college or technical school examination, in medicine this is not the case; and to this condition the author appended the question, "Is it fair?" Suggestions as to the cause of this condition were to be found in the nature of the physician's calling and the indifference of the profession.

The last paper of the afternoon was by Medical Director Gihon, U.S.N., entitled "*The Higher Plane in Medicine.*"* In this paper the author pointed out some of the glaring defects of our present system of teaching, and demanded their correction.

The evening session was given to hearing the address of the President, Dr. Marcy, of Boston, who had selected as his subject "*The Recent Advances of Sanitary Science; the Relations of Micro-Organisms to Disease.*"

After expressing his thanks, and congratulating the Academy on its continuous prosperity, he entered upon the topic of his address. Differences of opinion have existed and will continue to exist, but, other things being equal, the better trained and better equipped soldiery will win. Rationalistic medicine exists alone without rivals, while *isms* or *pathies* will cease to be. There is a twofold duty for the physician, and the first is the prevention of disease, cure occupying a secondary place. Sanitation can hardly be called a science as yet. Much of what we deem modern was in use by those of the olden time. Hippocrates framed a wise maxim in "pure air, pure water, and a pure soil."

The discussion of the problems of life is not only instructive but fascinating. Mohammedanism, at least, is commendable in its provisions for cleanliness and careful living. The plagues of the Middle Ages would now be classed among the filth-diseases.

The best definition of health may perhaps be expressed in a hypothetical equilibrium between waste and repair exercised by the vital processes. The safe removal of the waste and worn-out material is one of the chief factors of sanitary science, and as the number of individuals gathered together increases, so does the complexity of the prob-

* This paper will appear in full in our next issue.—Ed. M. T.

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“This is a special distinction for their reliable preparations, as the award was made after a careful analysis of specimens of Messrs. Schieffelin’s manufactures by prominent chemists.”—*Medical Record*, New York, Sept. 22, 1883.

lem increase: hence this age of steam, by permitting greater aggregation of men, greatly enhances the difficulties of the problem.

The lecturer then considered the atmosphere and its impurities, more especially those products of organic decomposition, the so-called disease-germs and lower forms of life. Many of these are visible in the air, such as are revealed by a beam of light, as first shown to us by Tyndall.

The impurities in water, especially the lower forms of life, were next discussed, and particular attention was called to soil-pollution, and to the fact that after a while the soil does not purify. The importance of the study of the sources of septic poisoning was inferred from the fact that a greater number died in the army during the late war from zymotic diseases than from wounds. It will not do for physicians to be blind to these things, but the rather disseminate among the masses proper instruction of the cardinal virtues of right living, and use every means in our power for the enactment and enforcement of wise sanitary laws, so that rich and poor alike will be abundantly supplied with pure air and water and have their habitation upon an uncontaminated soil.

At the last meeting a resolution was adopted authorizing a subscription collation to be partaken at the close of the annual address, which was carried out at this time, greatly aiding in giving good fellowship and pleasant acquaintance among the Fellows.

On Wednesday morning the council recommended the following gentlemen for Fellowship: Dr. P. A. Morrow, New York; Dr. Herman Knapp, New York; Dr. W. S. Todd, Ridgefield, Conn. They also nominated to honorary Fellowship Dr. J. Marion Sims, of New York. These gentlemen were all elected.

The nominating committee presented the following report:

For President.—Dr. Benjamin Lee, Philadelphia.

For Vice-Presidents.—Dr. A. L. Gihon, U.S.N., Washington; Dr. Nathan Allen, Lowell, Massachusetts; Dr. G. F. Shrady, New York; Dr. E. J. Birmingham, New York.

For Secretary and Treasurer.—Dr. R. J. Dunglison, Philadelphia.

For Assistant Secretary.—Dr. Charles McIntire, Jr., Easton, Pennsylvania.

Place of next meeting.—Baltimore, Maryland.

The report of the committee was received, and the several nominations were unanimously confirmed by ballot. The first paper of the morning was by Dr. L. S. Pilcher, of Brooklyn, on "*The Relations of Medical Journalism to Higher Medical Education in America.*" Dr. Pilcher discussed some of the papers of the previous day as a preface to his paper, since his ideas of the character of the "higher medical education" were not in harmony with those of the essayists of the day

previous. Continuing with his paper, the doctor called attention to the unrest, the fermentation that had been going on in the world of science for the last twenty-five years, in which medicine sympathized and with which she kept pace. The outcome of this was an elevation of the education of the average physician. Medical journals collected, assorted, utilized the material gathered by this investigation. The character of medical teaching has thus been revolutionized, and medical journals supplement the studies of the schools and constantly incite to a higher standard of medical education. The conclusions of Dr. Pilcher were reviewed and criticised by Drs. Steiner, Gihon, and Sibbet.

The next paper was by Dr. J. Cheston Morris, of Philadelphia, on the "*Milk-Supply in Large Cities,*" in which he spoke first of the importance of milk as an article of diet, the impossibility of improving upon its flavor or value by any artificial methods, and the constant necessity of having it absolutely pure and sweet. The present accepted plans of supplying cities with milk, and the difficulties encountered in delivering the milk in a good condition and of full strength, were discussed. The remedy proposed was to put the milk in bottles or jars at the farm, after carefully cooling the milk and stirring, so that the cream may be evenly mixed. These jars are sealed and sent in this way to the consumers. This method is no longer a mere fancy, but is practically and profitably worked by several farms near different cities. The importance of the subject may be determined when Philadelphia alone is estimated to expend about \$100 000 a day for milk.

"*The Exact Value of the Electrolytic Method*" was the title of a paper read by Dr. A. D. Rockwell, in which the author, by a careful examination of the effects produced by electrolysis upon the various organs and pathological conditions, was able to formulate to what use electrolysis might be put.

Dr. Dunglison then read the Annual Report of the Committee on Laws of Medical Practice in the United States and Canada. This committee has been at work for some time upon this subject, reporting yearly the changes that have taken place. The general tone of the report was one of encouragement. Our legislators are awakening to the fact that a physician should have certain qualifications for the calling he professes.

"*The Importance of Cleanliness in Surgical Operations*" was the title given to papers submitted by Dr. R. S. Sutton to the Academy and the American Gynecological Society, the papers being alike in name only. The doctor is inclined to the opinion that the evil influence of bacteria is exaggerated; many of them are harmless; but some are capable of causing septic poisoning, and, as in practice we cannot differentiate between them, all germs must be fought. This he prefers to do

by great care to secure absolute cleanliness. Indeed, the great good obtained by Listerism is brought about by the great cleanliness produced by the method. In the absence of Dr. Sutton, this paper was read for him by the Assistant Secretary.

For the same reason, Dr. Keyser read the paper submitted by Dr. Lewis P. Bush, entitled "*Some Thoughts on Vaccination.*" The objections to vaccination were thought to be frequently due to an imperfect or spurious vaccination being depended upon as protective, and because it failed to grant protection the whole plan was denounced. On this account, possibly, it would be best to have public vaccinators, who would be careful about the results. The disease smallpox is so loathsome in itself, entails such suffering and neglect upon those who are afflicted, and, should they recover, is so apt to disfigure them for life, that every means should be taken to put properly before the people the value and utility of vaccination thoroughly and properly done.

At the conclusion of the papers, Dr. Marcy pronounced his valedictory in a few but eloquent words, and appointed Dr. Keyser to conduct the President-elect to the chair.

Dr. Lee, in taking the chair, took refuge in the proverb "Still waters run deep," and, if his words were few, he felt deeply grateful for the honor conferred. He then appointed as additional members of council Dr. C. C. Bombaugh, of Baltimore; William Elmer, Jr., of Trenton; and J. Cheston Morris, of Philadelphia.

The Academy then brought its eighth session to a close, the attendance being larger than ever before, with an interest maintained until the hour of adjournment.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 10, 1883, George F. Shrady, M.D., President, in the chair.

The minutes of the previous meeting were read by the Secretary, and approved.

AMPUTATION OF THE KNEE.

Dr. Wackenheimer presented the parts entering into the formation of the knee-joint, removed by amputation recently from a patient suffering from arthritis. The patient, aged 52 years, two months before the operation observed slight swelling of the knee, which increased rapidly during the last three weeks. But very little pain was present. The examination of the specimen after amputation at the thigh showed that there seemed to have been recent hæmatoma; the head of the tibia and fibula had undergone rarefaction; pus was absent. The patient had been able to stand on the leg up to the time of the operation. He was now in good health; the temperature and pulse had fallen to normal.

The President referred to two cases which recently came under his observation, which fell under the head of the spinal arthropathies, and in which pain was scarcely a noticeable symptom. One of the patients was able to walk with perfect ease, except for twisting about of the affected knee.

OPERATION FOR STRANGULATED INGUINAL HERNIA.

Dr. Elliot presented the specimen, which was obtained from a young man, aged 19 years, who began to suffer from symptoms of hernial strangulation two days previous to his entrance into the hospital. Attempts at taxis had proved unsuccessful. During the past twenty-four hours stercoraceous vomiting had been present; the patient was unconscious; there were symptoms of partial collapse. The parts were found partially adherent to the walls of the sac, but not apparently gangrenous. But it was considered best not to return them to the abdominal cavity. The patient did not regain consciousness, but died within a day after the operation. There was found some clear serum in the peritoneal cavity, but no positive signs of active inflammation. The points of interest in the case were the descent of a congenital inguinal hernia and strangulation for the first time at the age of nineteen years; the fatal result without signs of active peritonitis; the possibility of recovery had the tumor been reduced.

Dr. Carpenter once operated for a strangulated direct inguinal hernia of five days' standing, or longer. The patient, however, did not recover from the shock. The tumor had been returned, although the propriety of doing so had been questioned. It was of interest to note that the physician who first saw the patient, taking the case to be one of indirect inguinal hernia, used taxis, with the result simply of increasing the size of the tumor by pushing the gut up the inguinal canal.

INOCULATION OF SCARLATINA POISON IN HORSES AND CHILDREN.

Dr. Peters reported progress from the committee appointed to investigate the question of scarlatina in horses. The report gave the results of attempts at inoculation made by Dr. Sickler. Two colts and one calf were experimented upon. The symptoms, developed with more or less uniformity, were the following: redness of the pharyngeal mucous membrane, swelling of the glands of the neck, rise of temperature and increased pulse-rate, discharge from the nose, eruption, restlessness. Seven children, all in families in which scarlatina existed, were inoculated either by introduction of blood or scarlatinal scales from a patient sick with scarlet fever, or by inhalation of the scarlatinal exudations. The result was rapid development of scarlet fever in all but one case, in which a few days first elapsed. The symptoms were mild, and

in but two cases did albuminuria appear. All recovered. Scarlet fever in horses was not generally recognized by veterinary surgeons in New York, but the disease was described in veterinary books, and was traced back as long ago as it was known to exist in man. It was not improbable that man first took it from the lower animals. A certain form of pink-eye, in which pinkness of the eye, however, was by no means uniform, was considered by Dr. Peters to be scarlet fever. In cases of doubtful origin in children, the possibility of the disease having been brought home in the clothing of the men from the livery-stables was not to be overlooked.

CEREBRAL SOFTENING.

Dr. Ferguson presented the brain, the seat of extensive softening in the right hemisphere, removed from a woman, 65 years of age, who had suddenly developed paralysis of the left side of the body, with difficulty in speech, after an extensive burn upon the chest, arms, and legs, from boiling water. The temperature, pulse, and respiration rose, and she died some hours after the injury. She was said never to have been sick before. The left ventricle was found hypertrophied and moderately dilated; the kidneys, the seat of extensive diffuse nephritis. The right side of the brain was extensively softened, especially in the parietal region; the ventricles dilated. The left hemisphere was normal. The tongue had also deviated to the left. Notwithstanding the extent of the kidney-lesion and the presence of numerous hyaline, granular, and fatty casts in the tubules, examination of the urine had proved entirely negative. There was no sign of embolism, thrombosis, or of hemorrhage, except very slight in the ganglia. The case had occurred too recently to admit of careful microscopic examination.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

At a meeting of the profession called for the purpose, September 25, 1883, at the hall of the Academy of Medicine, New York, the American Climatological Association was organized, and forty names were enrolled as members.

The objects of the Association were stated to be the study of diseases of the respiratory organs, together with the influence of climate thereon.

A committee consisting of Dr. Tyndale, of New York, Dr. Bruen, of Philadelphia, and Dr. Garland, of Boston, was authorized to act temporarily as a Board of Censors, and to draft a constitution and by-laws, and submit the same at the next meeting.

The following officers were elected:

President, Dr. A. L. Loomis, New York.

First Vice-President, Dr. F. J. Knight, Boston.

Second Vice-President, Dr. W. H. Geddings, Arkansas.

Secretary and Treasurer, Dr. J. B. Walker, Philadelphia.

It was decided to hold the first annual meeting in 1884 at Washington either immediately before or after the meeting of the American Medical Association, for which the following were appointed a Committee of Arrangements: Drs. Alex. Y. P. Garnett, Washington, D.C.; F. Donaldson, Baltimore; F. Bosworth, New York; L. Shurley, Detroit; J. C. Wilson, Philadelphia.

REVIEWS AND BOOK NOTICES.

THE PHYSIOLOGICAL FACTOR IN DIAGNOSIS. A WORK FOR YOUNG PRACTITIONERS. By J. MILNER FOTHERGILL, M.D., Physician to the City of London Hospital for Diseases of the Chest (Victoria Park), etc., etc. New York, William Wood & Co., 1883. pp. 251.

To those who expect to find this volume anything more than an excellent manual of symptomatology, abounding in facts of value well set forth in the familiar style of the author, the somewhat striking title will prove misleading. Nevertheless it is a book to buy and read. A more formal arrangement and a more methodical treatment of some of the subjects would have enhanced its value as a work of reference. It is fresh, crisp, and suggestive on every page, in every line. In thirteen fluent chapters the author discusses the sick man and his sickness, and how the young practitioner is to obtain a useful knowledge of both. The (1) history of the family and the individual, (2) the external appearance, (3) the tongue, (4) the respiration, (5) the pulse, (6) the alimentary canal, (7) the urine, (8) the reproductive organs, (9) the temperature, (10) motor and sensory disorders, (11) the patient's sensations, (12) the patient in his bedroom, are treated of in the first twelve chapters in an instructive and often amusing way. The concluding chapter is wholly personal, and in it Dr. Fothergill disarms criticism of the rapidity with which his books appear, by promising for the future to devote his time to the revision and enlargement of his works and to getting out new editions. The present volume gives us the impression of having been "made" in haste. There are occasional inelegant expressions and some inaccuracy. In reading proof, *Torcula Hierophili* (p. 213) has been overlooked.

We cannot too heartily commend Dr. Fothergill's oft-repeated direction to diagnose the patient as well as the disease, which is in truth the watchword of the book, just as elsewhere he has manfully insisted that to treat the patient rather than the disease is the object of therapeutics.

J. C. W.

THE ROLLER BANDAGE. By WILLIAM BARTON HOPKINS, M.D., Assistant Demonstrator of Surgery in the University of Pennsylvania, etc. Small 8vo, 95 pages. J. B. Lippincott & Co., Philadelphia.

In the preface of this little work the author states that "each bandage was applied to a living model, and whenever the roller pursued a course which the author has found in his association with students was the cause of uncertainty, it was at once photographed." "From these photographs accurate drawings were made." This plan has relieved the book of the stereotyped plates which have done duty for so many years in works on bandaging, and gives an appearance of newness which is refreshing. With a few exceptions, the turns of the different bandages are distinctly portrayed by the method of illustration employed. In the drawing representing the application of Velpeau's bandage the hand is placed on the summit of the sound shoulder, instead of upon the acromion, as directed by Velpeau in his description of the bandage. The directions given for application of the bandages are clear and specific, and will be easily comprehended, we think, by students,—to whom the book will be a guide in the surgical room. J. E. M.

MISCELLANY.

DR. HENRY LEFFMANN, Professor of Chemistry in the Philadelphia Polyclinic, has been elected to the chair of chemistry and metallurgy in the Pennsylvania Dental College, which had been rendered vacant by the death of Prof. T. L. Buckingham.

DEATH OF ONE OF THE FRENCH CHOLERA COMMISSIONERS.—Dr. Thuillier, a member of the Pasteur Scientific Mission, died at Alexandria on Tuesday, the 18th ult., of cholera.

NOTES AND QUERIES.

THE LAST OF THE BARBED-WIRE BEEF-SKEWER.

MR. EDITOR,—At a recent meeting of the Philadelphia County Medical Society, Dr. W. R. D. Blackwood read a paper entitled "Remarks on the Chicago Beef Wire Skewer." This was also published in the *Medical Times*, October 6, 1883. Briefly speaking, the article may be divided into three paragraphs: the first and third treat of the mode of preparation, the shipment, and the superior excellence of the meat of a certain dealer. About this I have nothing to say, as it has no bearing on the matter of which I shall treat; but the second paragraph contains remarks which need to be referred to.

Some months ago, my attention was first attracted to the beef-skewers in question by several cases which came under my care, which was soon followed by a publication warning meat-consumers of this danger. The allegation that this was a sensational attack made on this variety of beef in the interest of a "clique of butchers" is not recognized, as I have not had the pleasure of being acquainted with such a body. This matter was at once thoroughly investigated by Messrs. Abner A. Jewitt & Co., wholesale dealers in Chicago dressed

beef, of this city. These gentlemen were so thoroughly convinced that it was not the work of a *clique*, also of the importance of preventing further danger from these skewers, that they at once ordered them to be removed and their use discontinued. This action certainly demonstrated that the danger was not a supposed one, but an actual one. As was the custom with exporters of Western beef, one barbed skewer was used on each quarter of beef to fasten the tag; this, of course, reduced the danger to a minimum; but when it is considered that a number of retail meat-dealers were also in the habit of using this variety of meat-skewer to fasten their business cards on every rib-roast, etc., that left their establishments, it can be understood that the danger was manifestly increased. It is needless here to speak of the great variety of foreign bodies which may find or have already accidentally found their way into the upper air and alimentary passages; the latest was the Chicago beef wire skewer, which we need no longer fear. Since the publication of my paper calling attention to the subject, its use has been discontinued, and it is now a thing of the past.

Very respectfully,

JOHN S. MILLER, M.D.,
Assistant in the Laryngological Department,
Jefferson Medical College Hospital.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 6 TO OCTOBER 13, 1883.

HAMMOND, JOHN F., COLONEL AND SURGEON.—Leave of absence on surgeon's certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability. Paragraph 7, S. O. 231, A. G. O., October 8, 1883.

SWIFT, EEBENZER, LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR.—Under the provisions of Section 1 of the act of Congress approved June 30, 1882, is, by operation of law, this day retired from active service, and will proceed to his home. Paragraph 4, S. O. 231, A. G. O., October 8, 1883.

HARTSUFF, ALBERT, MAJOR AND SURGEON.—Granted leave of absence for fifteen days. Paragraph 2, S. O. 205, Department of the Missouri, October 6, 1883.

MEACHAM, FRANK, MAJOR AND SURGEON.—Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

CRONKHITE, H. M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort D. A. Russell, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

WEISEL, DANIEL, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Fred Steele, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

ARTHUR, W. H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Washakie, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM OCTOBER 6 TO OCTOBER 13, 1883.

Surgeon F. L. DU BOIS detached from Naval Rendezvous, Philadelphia, and ordered as member of the Medical Examining Board, Philadelphia.

P. A. Surgeon CHARLES W. RUSH detached from the Naval Hospital, New York, and ordered to the receiving-ship "Colorado," New York.

P. A. Surgeon M. D. JONES detached from the Naval Hospital, Washington, D.C., and ordered to the Naval Hospital, New York.

P. A. Surgeon RICHARD ASHBIDGE detached from the Naval Academy, and ordered to the U.S. steam-ship "Swatara."

Surgeon THOMAS HILAND granted leave of absence for one year, with permission to leave the United States.

Surgeon WILLIAM J. SIMON and **P. A. Surgeon M. H. CRAWFORD** ordered to report on November 1 for duty on board the U.S. steam-ship "Trenton."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 3, 1883.

ORIGINAL LECTURES.

THE HIGHER PLANE IN MEDICINE.

BY ALBERT L. GIHON, A.M., M.D.,

Medical Director U.S. Navy, Fellow of the American Academy of Medicine, etc.

Read before the American Academy of Medicine, at its Annual Meeting, held in New York, October 9, 1883.

IF ever there was a time when the letters M.D. appended to a man's name rightly signified that he was *doctoratus in arte medica*, there can be no doubt, in this day, that want of skill in the *art* is too often supplemented by a profound ignorance of the substantial groundwork on which is reared the superstructure of the *science* of medicine.

Of the more than ninety thousand regularly graduated orthodox medical practitioners in the United States how many there are whose horizon is upon this level! That the proportion of those who never enter the temple at all, but hang upon its purlieus, is alarmingly great; no Fellow of this Academy will contest; the prominent object of its organization being the encouragement of young men to "pursue regular courses of study in classical and scientific institutions before entering upon the study of medicine." The furtherance of this object—by calling attention to that higher plane on which so few stand, but where all should stand—is all I propose in the few minutes I will occupy of your time.

Remedies for defective medical education have not been lacking. The urgency of the need has been set forth by the journals of the profession, and in the State and National Associations. Before, however, attempting to scourge the money-changers out from the temple of the true faith, it may be profitable for us to ask ourselves, "Why are they there?" Possibly we may find that the rank and file are less to blame than the leaders who have not led, the standard-bearers who have trailed their ensigns in the dust, the sentries who have slept on picket-duty. It may be, too, that you and I have left undone the things we ought to have done.

In the popular view, doctors are men (and women) who cure sick people, heal their sores, mend their broken bones. They are graded chiefly by the kind of houses and localities in which they dwell, the style

of their equipages, and the size of the fees they are recognized as having a right to demand; but corn doctor and horse doctor, eye doctor and woman doctor, are all made members of the same guild. "Pills" is the sobriquet both of the assistant surgeon and the surgeon of the fleet, as well as of the loblolly-boy and the apothecary on the berth-deck. "Knights of the scalpel," "Galen's Guards," or, with broader alliterative witticism, "Physickers and fee-seekers in council," are terms judged appropriate to designate in the public prints the annual assemblies of the representative body of the profession. The barber and the leech do not, it is true, any longer share titles and functions, but the old woman who mixes a poultice and the gold-spectacled savant who writes a prescription are recognized as having one and the same vocation.

Is the public only to blame for this low estimate of the profession of medicine? Are the tyros who swell its numbers themselves culpable, that they stand in the crowd so far below the plane of the elevated physician? If not these, who then?

I do not think there can be any question that medicine is regarded both by the people and the many physicians themselves as a money-making occupation, rather than as a scientific study engrossing the highest faculties of the mind,—this, in the case of physicians, because the young men who embrace it as a profession have been accustomed from the beginning to look only at its trade aspect. Physicians, like other mortals, must be fed, clothed, and domiciled to exist at all, and they apply their knowledge to the needs of humanity with the hope of gain, that they may be able to buy the all-important food, clothes, and habitations; but they are apt to lose sight of the fact that this is only the practical application of information acquired in the study of a grand science,—that the relief of individual suffering is an incident in the broader problem of the protection, development, and advancement of the human race. They keep their eye fixed on the smaller object of the sufferer of the moment, instead of ranging their view over the whole field of human existence. So far as the ailing Jones and his wife are concerned, their pains and aches are of far more moment than the origin of species, the nature of the *vis vita*, or the mysteries of cytogenesis; and they may be pardoned for preferring the quack, who

mystifies them with a lie and soothes them with a panacea, to a Flint or a Paget; but do not let us forget that the ability to relieve pain and banish tears is the outcome of the study of complex organisms through long stages of evolution and of mysterious vital phenomena, involving diligent application, profound research, and the highest efforts of the reasoning powers. Especially do not let those of us who assume the office of instructing the young err in giving them the impression that the only aim of medicine is to straighten a broken limb or check a diarrhoea. There is no higher plane of thought or action for one who has been fed at this font. He matures in the stage of arrested development, content to wallow in the slough of professional ignorance, and a lucky combination which multiplies fees will interest him more than the discovery of a microbe which suggests infinite possibilities.

Properly enough, the bones are the medical student's professional alphabet, though I am not quite sure that a developed human bone is the correct alpha. Quite as often, however, volumes of practice in the preceptor's library are read *pari passu* with the anatomy, and prescriptions are learned by heart *before an idea has been formed of the organs and functions their constituents are designed to affect*. Possibly the preceptor, with intended kindness, exhibits cases, takes the youth on a round of visits, or intrusts him with some minor responsibilities which have the effect of diverting him still more from that slow systematic grounding in the principles of medicine which should precede the knowledge of the name of a single disease or of a single remedy.

From the preceptor's office, where the tutelage is often as nominal as the duration is short, the embryo office-student becomes the college-larva, and the same food is fed to him. On the benches of the amphitheatre first-course students watch an operation or get a veneering of slap-dash diagnosis, though as ignorant as their mothers of the meaning of the curious terms they are hearing for the first time.

Finally, the youth goes through the farce of being graduated, with a stock in trade consisting of a list of imaginary entities labelled as diseases, and of a corresponding list of antidotes in the shape of remedies and prescriptions, and with this begins his career,—fortunate if before his neatly-gilded sign loses its glare he recognizes a

fever which he knocks in the head with the appropriate bludgeon, or encounters a broken bone which he successfully straightens, or a pleurisy which he manages to blister, purge, and sweat into a longer or shorter convalescence. But what can he really know of that marvellous mechanism called man? What of that great scheme of organization beginning with the individual monads and culminating in that aggregation of them called Cuvier? What of cell-growth, development, transformation, migration, and the struggle for existence against hordes of warring bacteria? What of evolution and correlated forces, of man's place in the Kosmos, of the laws of life, and the realities and possibilities of the material organism, and those immaterial psychic influences by which it is governed and controlled?

How should he? Was he ever taught by his preceptor that medicine is a science, demanding the exercise of the intellect, based upon an intimate acquaintance with the inanimate as well as the animate world, finding its source in every other branch of human knowledge, concerning itself about man's place in the universe, his origin and his destiny, his present well-being, his happiness, his prosperity, and his permanence?

At college what prominently attracted his attention?—professorship after professorship of practical branches,—Surgery, Practice, Obstetrics, Ophthalmology, Otology, Laryngology, Dermatology, Gynæcology, Diseases of the Throat and of the Nose, of the Respiratory Organs, Mental Diseases, Venereal Diseases, Diseases of the Brain and Nervous System, Diseases of Children, and Diseases of Women. Even at Harvard, Clinical Medicine and Clinical Surgery crop in upon the second year. One course is enough; and the student,—whether it be a young man from an academy or from his father's farm, or a middle-aged man who has found piano-tuning unprofitable or wearied of confinement at a clerk's desk,—with a general idea of his anatomical interior, a vaguer conception of the functions of its enclosed organs, detesting the chemistry which he has skipped or has heard without understanding, and dangerously wise in drugs, plunges into Special Pathology and Special Therapeutics in his second year,—like a child into a mud-puddle,—and soon talks glibly of symptoms, when he knows nothing

of their pathological significance, and of treatment, though profoundly ignorant of the physiological effects of his doses.

Naturally, one result of this early mini-fying process of concentrating the mind exclusively upon the immediately practical aspects of medicine,—this looking at its study through the small end of the telescope until the eye becomes unable to recognize the wider view unfolded by the other,—this conception of it solely as a money-getting occupation,—is the fruitful cause of the development of petty rivalries of business and contentions over the loaves and fishes. The cordial, graceful amenities of a fraternity of scientific investigators are supplanted by the narrow spirit of exclusiveness which characterizes trade organizations.

At the recent meeting of the American Medical Association I had occasion to read a paper before the Section in State Medicine, in which I undertook to establish that a higher medical education was the fundamental fact in medical ethics. I quoted from the records of the Naval Medical Board of Examiners, of which I had been a member, numerous instances of scandalously defective education on the part of regular graduates of the most reputable orthodox schools, who had presented themselves for admission into the medical corps of the navy. As these will be published in the Journal of the Association, I need only cursorily mention them here. These were M.D.'s whom it were folly to expect to rise to that higher plane which it is my present object to insist is the proper level of the profession. Most of them were only fit to claim fellowship with the old women and the male cot-betties who are its camp-followers. What, for instance, is the place in the medical commune of that M.D., who was of unassailable regularity and unquestionable orthodoxy, who deliberately demonstrated the spermatic cord in a female subject? or his, who, having attempted a disarticulation through the tarsus, declared that he would allow the protruding cuneiform bones to remain until they skinned over? or of that one, who treated orchitis by removing one or both testes if the inflammation should not subside after rest, cold applications, and occasional anæsthetics? or of that other, who defined "pneumonia" to be a peculiar disease affecting one lung and "pleurisy" the

name given to it on the other side? or of the worthy, who advised cauterization of the soles of the feet in congestion of the brain, using the actual cautery for poor people, and the potential cautery, by which he meant nitrate of silver, for rich patients, that they might not be incommoded by the smell of the burning flesh? or his, who said he would trephine for fracture at the base of the skull? or his, who not being able to sweat his puerperal woman with Dover's Powder gave her hot tea and a Russian bath? or his, who accelerated the expulsion of the placenta by walking his labor case about the room, five minutes being allowed to elapse after delivery before he required this exercise? I have no reason to believe that these instances are exceptional. I can parallel them with equally flagrant cases among men who would have spurned the suggestion of becoming a "navy doctor," two which just occur to me: one, a surgeon of local reputation, who was about to operate for an ovarian tumor in a case I was asked to see by the mother, and whose labor was saved him by the introduction of a catheter in the lost meatus; the other, who had encased a young girl in an irksome and cumbersome apparatus for fracture of the clavicle, when an examination on my part (unethical, I admit), in her grandfather's study, revealed no solution of continuity whatsoever. These men were all found wanting in simple practical matters. What if the examiners had ventured to question them about biological phenomena, about solidistic and humoral pathologies, or general considerations as to the nature of lesions of nutrition, or that well-gnawed bone of contention, fundamental methods of cure? Could the M.D. who defined "coxalgia" to be inflammation of the coccyx, "potable water" to be water that can be carried, "pneumothorax" to be a collection of pus, "acupressure" to be pressure by the finger or any other instrument, and "cholera communis" to mean *communicable cholera*, have ever understood the meaning of ordinary English terms sufficiently to have read intelligently a treatise or comprehended a lecture on pathological principles?

The subject of higher medical education is not a recent agitation. I have heard it argued ever since I was out of my own professional swaddling-clothes; but, beyond admissions of its need, confined to cer-

tain carefully-generalized statements as to insufficiently-prepared physicians, and the efforts of a few independent medical schools to extend their curricula, there has been nothing definitely asserted or instituted. No reform, however, has ever been accomplished, especially in this country, when it has been supported by mere abstract statements. Facts and figures that cannot be disputed are the granite foundations on which the new edifice must be erected. Yellow fever is only dreaded when your neighbor dies of it. Syphilis is deplored, like murder and highway-robbery, as a thing foreign to our own virtuous stronghold, until we see some gentle maiden guiltlessly contaminated, and we begin to calculate the millions of dollars the plague has cost, and see how communities have been decimated by the venereal scourge. Hence neither the public nor the profession will be satisfied that there are so many arrant fools who go about legally authorized to append M.D. to their names until the fact is thrown before a calcium light upon a screen, where all who run may read. I have quoted from the records at my command, with no desire to exalt those who have successfully passed the ordeal, but to show conclusively what manner of men are able to become legitimately possessors of degrees from schools of the first rank.

Of eleven hundred and forty-one candidates examined for admission into the medical corps of the navy during the past twenty years, only thirty-two per centum were accepted. I do not mean to claim any superexcellence for the fortunate (or unfortunate, if you prefer) three hundred and seventy. Doubtless many of these might also have properly been refused. Possibly there were among the unsuccessful seven hundred some who would have been found acceptable by other examiners, or who were victims of circumstances which obscured their merits or occasioned them to be unjustly treated. But were there only five hundred not fit to wear the professional toga, the inexorable logic of figures would be enough. Were there only one hundred shown to be invested with a dignity to which they were not entitled, the case would have been proven. Within the limits of a twenty-minute paper, I introduced twenty-five such, all of them graduates in medicine from schools of acknowledged orthodoxy, who out of their own mouths and by their own hands de-

monstrated not only their unfitness to practise the art of medicine, but their original incompetence to enter upon its study; and this I think as worthy your attention as the former, for, this established, the other is its necessary corollary. Can it be conceived that the graduated physician who "respectively" addressed his application to the "Navel Medicle Bord" was ever able to comprehend the description of the anatomy of the simplest bone? Whatever his natural ability, could such terms as *foramen* or *sulcus* or *condyle* or *apophysis* convey to him any better idea of their significance than so many French or German words? Pertinent here, let me say I had written this sentence when a certificate of the death of a friend and colleague was sent me by the family from his attending physician, written in a school-boy scrawl, interspersed with periods and other punctuation-marks where they had no place, with orthographical blunders of which "exhertion" and "attendent" and "enfeeble condition" are samples, beginning "To whom it may concerned," but wound up with a bold, rotund, unmistakable M.D.,—a production so illiterate that I was ashamed to file it as the work of a professional *confrère*.

President Johnson is said to have remarked to Judge Black, when the latter quoted the intolerance of the populace who cried, "crucify" the Christ, as an argument that the *vox populi* is not the *vox Dei*, "Remember that we have had the advantage of eighteen centuries of enlightenment." Mr. President and Fellows, remember your own twenty-five or thirty years of experience, or rather try to forget them, and place yourselves in the position of that uneducated youth or man who, when a full-fledged doctor, wrote "blud," and "orful," and "scassity," and "inturlec," or that one who came from Vermont, "wher" he "*studed Latin grammer*," or that other who did not come from Massachusetts, but who declared that "Plymouth was settled by Columbus, who gave the town its name,"—see with their eyes and listen with their ears, for an hour, to a description of the sutures and foramina and processes of the temporal bone, the origin and insertion of muscles and fasciæ, the coursing of nerves and vessels through it and by it; then pass with them for another hour to the chemical lecture-room, where equivalences and reactions are discoursed

about in almost another language, as foreign to them as the anatomist's; thence go with them to be instructed in the etiology, symptomatology, and pathology of enteric fever, where every other word is veritable Greek, and the clinical thermometer exhibited is the first thermometer of any kind they have ever seen. Yet here for the first time the novice thinks he stands on solid ground. He has sunk deep in the mire of anatomical terms; he has skirted clear of the quicksands of chemistry; he has made a hop, skip, and jump over the "bot-tony" of the materia medica; he has been wearied by the physiologist, and bewildered by the generalizations of general pathology; but in the clinical lecture or the amphitheatre he gains what he thinks is medical knowledge: he learns that quinine is a sheet-anchor and does not inconveniently kill; he sees a sore throat swabbed out by caustic, though he notes the one as "soar" and the other as "luner," and he hardens his heart to the necessary sticking-point after he witnesses a few jets of arterial blood.

Fellows of the American Academy of Medicine, it is not enough for you to organize "to encourage young men to pursue regular courses of study in classical and scientific institutions before entering upon the study of medicine." It is not enough to declare that it is *desirable* that matriculants shall possess a knowledge of the structure and uses of language and of the fundamental principles of natural science. You have got to say emphatically and publicly that these are essential, absolutely essential; that medicine cannot be intelligently studied without them; that Latin and Greek derivatives must be understood, else not only the nomenclature but the vernacular of the anatomist alone cannot be comprehended.

Os uteri and *os innominatum*, *quadriceps extensor femoris* and *sterno-cleido-mastoideus*, *tunica vaginalis* and *latissimus dorsi*, are no greater stumbling-blocks than common adjectives, like cancelled, reticulated, laminated, cutaneous, peripheral, or ganglionic. Is it or is it not a fact that a course of lectures on medical chemistry, which is simply chemistry in its relations to medicine, necessarily presupposes the preliminary knowledge of chemical principles? If it is, then say that neither the country bumpkin nor the city clerk can listen for the first time to disquisitions about atoms and molecules, oxides and suboxides and peroxides, phosphates and phosphites and

hypophosphites, and gain a single salutary idea. Can physiology be understood at all without a prior understanding of the facts of physics? Is it possible for the youth, whatever his natural parts, to master the phenomena of calorification, respiration, circulation, of absorption, nutrition, or secretion, and know nothing of the forces of nature that influence animate as well as inanimate matter? Can he hear of annual and perennial, of indigenous and exotic plants, of stamens and pistils, corollæ and petals, corms and rhizomes, and not be lost in what can only be to him a jargon of strange sounds? At this day, Hygeia can no longer be denied her place among the deities in our temple, but who can master the elementary laws of sanitary science if ignorant of the composition of the atmosphere, of heat and moisture, evaporation and condensation, of electricity and magnetism? What was the understanding of natural phenomena as a pupil of that "doctor in medicine" who said that "the boiling-point of Fahrenheit is about 300°, that of the centigrade scale not so high, and that of Réaumur higher," that he "could not tell what the zero of Fahrenheit was without having the other scales before him," and that "the natural temperature of the human body is from 112° to 140°"? or his, who defined the difference between electricity and galvanism to be that "one is the substance itself and the other its use"?

It is a common plea that bad spelling is not inconsistent with profound acquirements, and, while I admit that phonetic faults in English orthography are sometimes even commendable, I do not believe that those doctors, however regularly graduated, who wrote about *drams of lodnum* and *aurora epileptica*, who described the symptoms of *superation* and the treatment of *fishers of the anise*, who in one breath denounced *homeopaths* and in the next boasted of being a "reg'lar alleepath," were ever fit to be matriculated, or that any school that matriculated them deserved recognition. I have offered only evidence for which I can personally vouch, but I know from members of the Army Medical Board, of the Board of Examiners for the Marine Hospital Service, of the Illinois State Board of Medical Examiners, and the Secretary of the State Board of Health of West Virginia, that they can match anything I have adduced.

Nevertheless, when, aiming at an effective and immediate advance in medical education, I offered a series of resolutions at the May meeting of the American Medical Association, to which I sought the endorsement of that body, I failed to get even the Section in State Medicine to report them,—objection being made, not to the soundness of my position, but to the *expediency* of taking action. While the result was discouraging, I cannot say it was unexpected, former experience in reform movements having shown me that the antagonism of those interested in maintaining an abuse, and who hide themselves and stifle opposition by the gagging-process of a motion to lay upon the table, is scarcely more effective than the timidity or downright cowardice of those who applaud your motives but tie your hands with manacles of inexpediency. Two of the resolutions had the special object of excluding illiterate, ignorant, and incompetent graduates from the profession and from membership in its national representative body. A third, and the most important, urged upon the several legislatures the establishment of State Boards of Medical Examiners, whose certificate should be necessary to the issue of a license to practise, and upon “the authorities of every regularly-organized medical college in the State [which does not already require them],—first, the requirement of a proper preliminary education of matriculants, and, second, greater care in ascertaining the fitness of candidates for a degree.” In this Academy, at least, no argument is necessary to establish the need of a matriculant being able to read, write, and cipher, and to comprehend enough of the etymology of Greek and Latin derivatives to gather the meaning of the technical language of the profession; while the flagrant mistakes of so many graduates, which would be ludicrous were they not appalling in their possible consequences, are proof enough that some action is necessary in the way of establishing disinterested boards of examiners for degrees, in view of the lamentable fact that men, themselves able and educated, thoughtlessly affix their names to diplomas that are lies from beginning to end.

One other proposition in connection with graduation I offered merely as a personal suggestion,—to wit, “Medical colleges should confer upon graduates the degree of *Bachelor in Medicine*, such grad-

uates to be eligible to the degree of *Doctor in Medicine* at the end of three years, after having given satisfactory evidence of their qualifications to the Board of Censors of the State Medical Society.”

Time works its own reforms. There is no *retrosum* in this world. A new and better order of things is certain to be evolved. But shall we wait for the slow process of natural development? The sunrise comes, but ere “the dew-drop slips into the shining sea” shall we not see something of the light? Let us water the tender plant, feed its roots, and hope to gather its first fruits.

In a recent number of the *New York Medical Journal* there were published the annual announcements of sixty-seven non-sectarian medical colleges in the United States and Canada, recognized by the Illinois State Board of Health.* These aggregate seven hundred and eighty-seven professors or members of faculties, including forty-eight emeritus, retired, or honorary professorships; five hundred and thirty-nine assistant and adjunct professors, lecturers, instructors, demonstrators, prosectors, and examiners, a total of thirteen hundred and twenty-six; an average of twelve in each faculty, and a total of twenty teachers in each school, ranging from the modest staff of five of the University of Virginia, to the corps of sixty-four at the College of Physicians and Surgeons of New York, fifty-four at the Medical Department of the University of New York, fifty at the Medical Department of Harvard University, and forty-three at the Medical Department of the University of Pennsylvania, and at Bellevue. The chairs in many of the schools are so interlinked that it is almost impossible to group them in tabular form, *Materia Medica* being handicapped with Ophthalmology and Diseases of Children, Chemistry with Diseases of the Nose and Throat, Obstetrics with Psychological Medicine, Physiology with Venereal Diseases, and Ophthalmology with Histology and Pathological Anatomy. It is worthy of remark that in but one instance

* Since the date of this paper, the Illinois State Board of Health has published its admirable and valuable report on “Medical Education and the Regulation of the Practice of Medicine in the United States and Canada,” giving full details of the medical laws and institutions in the several States, Territories, and Provinces of the two countries. From this it appears that of 218 colleges accounted for 130 are still in existence (119 American, 11 Canadian), of which 85 are recognized by the Illinois State Board. Of these 6 are in Canada, all regular, and 79 in the United States, 63 regular, 11 homœopathic, and 5 eclectic. Nine other irregular American colleges have a conditional recognition.

is Comparative Anatomy mentioned as a subject of study, and then only as a lectureship, shared with General Anatomy, in the Miami Medical College, of Cincinnati. Another friend of our early days, the "Institutes of Medicine," finds special place in two Canadian and three American schools,—viz., the Jefferson Medical College of Philadelphia, the Albany Medical College as an emeritus chair, and the Medical Department of the Arkansas Industrial University, at Little Rock. Hygiene, after struggling for existence as an adopted child of Physiology, is now dignified as a professorial chair in twelve schools, as an adjunct professorship in one other, and in three as a lectureship; while in other nine it is still tied to the maternal apron-string of Physiology.

Of the sixty-one colleges in the United States, twenty-one require a preliminary examination, or the evidences of preliminary education; * seven of these, however, only vaguely exacting "satisfactory evidences" of it. The other fourteen explicitly prescribe a matriculation examination, or the possession of a degree or certificate of some academic institution; and perhaps I may be pardoned, as one of your Junior Fellows, for suggesting that the letter of our Constitution excludes from Fellowship men entitled to it by their literary, classical, and scientific acquirements, who have failed, sometimes from trivial causes, to become possessors of a formal degree. If this alone is exacted, how can we consistently deny the same weight to the degree of M.D.?

Four Canadian and twelve American colleges announce their adherence to the requirements of the Illinois State Board of Health, and seven require the final examinations to be in writing.

Likewise the point of the wedge of reformation has been driven into the curricula. The College of Physicians and Surgeons of New York recommends a third annual course; the Michigan College of Medicine, of Detroit, has a freshman, a junior, and a senior year, and restricts all clinical instruction to the last year; the University of Pennsylvania has an obligatory course of three years, and adds a voluntary fourth; and Harvard requires three years and recommends four.† Undoubtedly, if

what is thus recommended is commendable, it should be required, and Harvard insist upon its fourth year, the University of Pennsylvania make it obligatory, and Michigan substitute a sophomore for the present junior and extend the latter over a new junior and a senior year. Meanwhile, it has become the paramount duty of this Academy and of every other national medical association to lend these pioneers no lukewarm countenance, but to give them hearty, energetic, and efficient support.

A standard of preliminary education that will go far enough to embrace a knowledge of the natural sciences; a graded curriculum of four years; a rigorous examination for graduation by *disinterested boards*; a three years' baccalaureate probationary to the doctor's degree; all these are not enough, if preceptors, professors, and physicians, in general, fail to impress upon their pupils that medicine is something more than an art, seeking only to relieve individual suffering at so much a head; that its wider aim is to banish disease from the earth, prolong life, develop and improve the race, and thus increase the total of human happiness; that there is no grander or sublimer employment of the intellect than the study of man and his surroundings, catenated as it is with every other branch of knowledge; that he who is really learned in medicine is learned in many things, and moves in that higher plane which should be the aspiration of every man who presumes to add M.D. to his name. For those who are content to look no higher than the requirements of a daily routine, it would be better to make no pretence of education, but to recognize a class of general practitioners who can pull a tooth, apply a poultice, or chance a dose of calomel or castor-oil. Consign them to the *limbus fatuorum*, but do not claim for them equality and fraternity with EDUCATED physicians. The line must be sharply drawn. There can be no border-land. If the degree of M.D. is to be presumptive evidence of professional ability, see that it is the exponent of something definite. Repudiate sham colleges and sciolist teachers, and relieve the profession from the burden of the gross ignorance, illiteracy, and incompetency which are now its opprobria.

* Fifty-five regular colleges in the United States and ten in Canada are reported as "now exacting a preliminary education as a condition of matriculation."

† Fifteen regular American and ten Canadian colleges are

reported as "now requiring attendance on three or more courses of lectures before graduation," and fifty-six regular, seven homeopathic, and three eclectic as "recommending and providing for, but not requiring, three or more courses of lectures before graduation."

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF
OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

Ophthalmic Surgeon to the Episcopal Hospital.

THE NATURE OF THE JEQUIRITY OPHTHALMIA.

THE results of the investigations of Prof. Sattler with reference to the existence of a vegetable ferment in the jequirity infusion are of great interest by reason of their bearing on the germ theory of disease, as well as the attention which the remedy is exciting among ophthalmologists. A few points can only be alluded to. The jequirity bean itself possesses no principle capable of exciting the peculiar inflammation of the conjunctiva which occurs after the application of the macerated infusion. The effects depend upon a bacillus derived from the atmosphere, which finds in the albuminoid substance contained in the infusion the condition favorable for its propagation. An infusion which has been macerating for a day is filled with these bacilli. Higher temperature than 36° C. stops their development. The power of the infusion to induce an ophthalmia deteriorates by age, and finally ceases. The bacilli as they exist in the atmosphere are harmless; but in the jequirity infusion they acquire the physiological property of exciting the peculiar ophthalmia when brought in contact with the conjunctiva. [It is almost superfluous to say that these results have been attained with all the necessary precautions. H.]—*Klinische Monatsblätter*, August, 1883.

HEMI-ACHROMATOPSIA.

Swanzy reports a case of this form of defective color-perception. V in each eye = $\frac{6}{12}$; refraction of each eye slightly hypermetropic; optic nerve disks and retinae apparently normal; visual fields defective in the right upper quadrant. Holmgren's tests performed with accuracy. Testing the fields with colored wools resulted in finding the left half on each side totally color-blind. In the right half they could be detected, although the areas were concentrically contracted. Patient five months before had been seized with an attack of apoplexy; was unconscious twelve hours; in several days had completely recovered, excepting defective vision and confusion of ideas. Swanzy thinks

that this and similar cases (Landolt's, Samelsohn's, Bjerrum's) show that the nervous element in which the color-perception resides is in the brain, not in the peripheral visual apparatus; further, that the color-centre is distinct from that for form, sense, and ordinary light-perception.—*Lancet*, October, 1883.

[Granting that this patient's statements are to be relied upon, Swanzy's deductions seem hardly warranted. The most that this case shows is that consequent upon some intracranial disturbance the visual abnormality described occurred; it does not prove the location of the brain-lesion to have been a color-centre. The form of the color-defect is suggestive of the optic chiasm as the seat of the lesion, and perhaps the future history of the case will show it to have been one of progressive atrophy. H.]

INTRAOCULAR TENSION.

Schulten has examined the question of the elasticity of the sclera, and finds that at a pressure of 30–40 mm. Hg. it is very slight; for low pressures it is considerable. Post-mortem tension, as also in that of an enucleated eyeball, does not sink lower than 10 mm. The effect of the intraocular tension upon the flow of blood into the retinal and choroidal vessels seems to stand in a certain relation with the lateral pressure of the ophthalmic artery: when the intraocular pressure approaches the minimum of pressure of the artery, the flow of blood becomes intermittent; if the intraocular tension exceed the maximum pressure of the artery, the flow of blood stops.

The pressure of the ophthalmic artery is about that of larger vessels. The quantity of blood and the intraocular tension depend upon the lateral pressure in the blood-vessels of the eye, their tonus, elasticity, the quantity of liquid in the eye, and the external pressure.—*Arch. f. Ophthalmol.*, June, 1883. [It is not apparent in this abstract how the intraocular tension was measured:—probably by an instrument connected with the anterior chamber, as this is the method generally pursued. It is a fact, however, too little noted, that a distinction exists between the tension over the sclera and that over the cornea, and it is probable that the tension of the anterior chamber cannot be accepted as the real measure of the intraocular tension. H.]

TRAUMATIC GLAUCOMA.

Knapp reports the following case. Patient, æt. 29, was struck on R. E.; anterior chamber was absent, tension reduced, and myopia 5.5.D. A few days after the anterior chamber was restored, an attack of acute glaucoma was developed, which yielded to eserine. Sight was restored, and the myopia removed.—*Archiv f. Ophthalm.*, June, 1883.

A NEW INSTRUMENT FOR IRIDOTOMY AND DISCISSION.

Scherk, of Berlin, describes a needle for operating on opaque capsules or pupillary occlusions, such as occur after cataract-extraction. The instrument consists of a delicate shaft with one end fashioned into a small knife, similar to that of Knapp's discission-knife. The shaft fits closely in the handle of the instrument, like a trocar in a canula, and can be moved forward easily by the pressure of the finger on a button which projects from the handle of the instrument. The instrument is introduced into the anterior chamber and engaged in the capsule or iris as an ordinary needle; the button is pressed, the knife is pushed forward and cuts a hole in the tissue. [The principle upon which this instrument is based—of getting a maximum of cutting motion with a minimum of lever motion—is sound. The objection to the instrument is the canula device which is employed in its construction. H.]—*Klinische Monatsblätter*, August, 1883.

OPHTHALMOSCOPIC OBSERVATIONS AFTER HÆMATEMESIS.

Ulrich relates the following. Patient, a young woman, æt. 25, was very anæmic by reason of gastric hemorrhage. Seven days after the last bleeding, ophthalmoscopic examination simply showed pale disks. Two days later, fresh hemorrhage occurred, followed by a swoon. Ten minutes later, the eyes were examined: the disks were extremely pale, margins distinct, arteries small, with difficulty followed towards the periphery; veins normal as far as the sclerotic ring, where they suddenly lost their dark-red color and appeared of a bright red. This color-change depends on the relatively small amount of blood in this part of the veins. Close around the papillæ were numerous retinal hemorrhages, also some shining white plaques. The condition continued until the general condition of the patient improved, when she

was dismissed with $V = 1$, and visual field normal.

Hoffmann reports another case. Patient, a man æt. 47, was seized with several attacks of severe hæmatemesis. Two days after one of these attacks, complete blindness suddenly ensued, which, however, of itself slightly disappeared. Some weeks after, this patient came under observation. He was apparently in good physical condition; no albuminuria. The papillæ were paler than normal, but the retinal vessels presented no striking abnormality. R. V. = $\frac{6}{18}$; L. V. = movement of hand; refraction = E. The diagnosis was atrophy of both optic nerves.—*Klinische Monatsblätter*, May, 1883.

HEMORRHAGE AFTER ENUCLEATION.

Dr. Spaulding, of Portland, reports a case in which, after using, in vain, pressure and hot water, he succeeded in checking the hemorrhage by ligation of two arteries in the orbit. In the discussion in this case Prout said that in one instance he had controlled the flow by digital compression. Knapp referred to the necessity in enucleation of keeping close to the sclerotic. When the optic nerve is to be cut, it is a good plan to press the speculum into the socket: the eyeball is thus forced forward, and the nerve may more easily be divided.—*Amer. Ophth. Society*, 1883.

HYDROCEPHALUS WITH OPTIC NERVE ATROPHY, WITH CONTINUOUS FLOW OF WATERY FLUID FROM THE NOSE.

Professor Leber reports the following case. Patient was a girl, æt. 15½, hydrocephalic from birth. Six months ago, marked disturbance of sight developed, followed by frequent attacks of giddiness, later by two pronounced epileptic attacks. Atrophy of the optic disks, result of papillitis, was observed. Epileptic attacks recurred every six or eight weeks. Five days later, a continuous dropping of a watery fluid was observed from the nose. It varied in amount, reaching on one occasion in six hours 76 cub. cm. The epileptic attacks became very infrequent; headache and vertigo ceased apparently by reason of this flow. The sight did not improve. This fluid seems to have been cerebral. A few cases of the kind are on record.—*Arch. f. Ophthalm.*, 1883.

BRAIN-ABSCESS, WITH CHOKED DISK ON EACH SIDE.

Five weeks after the patient began to complain of cerebral symptoms, the result

of ophthalmoscopic examination was simply suggestive of a possibly commencing neuritis. Two weeks later, the cerebral symptoms having become more pronounced, a typical choked disk on each side was discovered. Post-mortem revealed two small abscesses involving left corpus striatum and a part of the thalamus opticus, also suppurative basilar meningitis. The case seems to have been one of brain-abscess, followed by basilar meningitis, perineuritis, and neuritis optici.—*Arch. für Ophthalmol.*, 1883.

IODOFORM IN CORNEAL AND CONJUNCTIVAL DISEASES.

Vossius gives the following results of considerable experience with iodoform. In a case of gonorrhœal ophthalmia it increased the discharge and swelling; one cornea, which previously was involved, was made worse, and the other, which had been intact, likewise became affected. Only one application was made, when a change of treatment was necessary. In blennorrhœa neonatorum it has no special value. In trachoma it sometimes seemed to do good, but oftener not: upon the granulations it did not act well, but sometimes when acute increase of the pannus would occur the iodoform seemed to relieve. Nor did it prove of value in phlyctenular conjunctivitis, pannus scrofulosis, parenchymatous keratitis. On the other hand, remarkably good results were attained in the treatment of corneal ulcer. Ninety corneal ulcers form the material upon which this statement is based. Especially in the *ulcus corneæ serpens* was the value of the remedy manifest. Thirty-six cases of this kind were treated: in seventeen of these severe dacrycystitis existed; in one old granulation with profuse purulent secretion. In three cases, Saemisch's operation was performed: in two of these, in spite of this and the iodoform treatment, the whole cornea became involved. In thirty-two of the cases surprisingly favorable results were attained by the iodoform alone. The iodoform was used in powder or in the form of salve. It seemed to produce an anodyne effect, relieving the violent ciliary pain and irritable condition of the eye. [An important practical matter seems to find illustration in this experience,—viz., that the treatment of local infection with septic material must vary with the nature of the infecting germ. Thus, certain septic forms of conjunctivitis and keratitis are very much helped by the

application of heat. The form of corneal ulcer above referred to, where the infection very often comes from the lachrymal sac, is certainly not very susceptible to the action of heat, but seems to require a substance which has a different therapeutic action. H.]—*Arch. f. Ophthalm.*, 1883.

CORNEAL GANGRENE PRODUCED BY INANITION.

Thalberg records some observations in corneal gangrene. Most of the cases were sucklings. The cause seemed to be malnutrition of the infant, or an impoverished condition of system in the mother, the result of prolonged fasting. The symptoms observed were sudden diffuse clouding of the cornea, generally preceded by xerosis of the conjunctiva, breaking down of the cornea, and sloughing. Sometimes, instead of diffuse clouding of the whole cornea, the opacity would be in the form of a white band which crossed the cornea. Sometimes two of these bands were present. Sometimes a catarrhal condition would occur, and then the case would closely resemble an ordinary blennorrhœa neonatorum with corneal necrosis. In the treatment very good results from the use of eserine in form of salve made with vaseline were obtained. By this is apparently meant that it was found useful after the necrosed tissue had been thrown off and a deep ulcer remained. It seems that the cases upon which these observations were made came under treatment generally at this stage of the disease.—*Archives of Ophthalmology*, June, 1883. [This morbid corneal process seems to be identical with that described by Graefe as corneal ulceration after infantile encephalitis, with the ophthalmia *Braziliana* of Gama de Lobo, and the corneal malacia described by Arlt. It is possible that malnutrition may be a secondary cause of the disease, but it is not likely that of itself it could produce corneal necrosis. A much more probable supposition is that these cases are caused by infection with micro-organisms. A case of this kind, which came under the reviewer's care some years since, was characterized by infiltration of the subconjunctival scleral conjunctiva, such as seen in diphtheritis. There was no false membrane. The patient died with profound typhoid symptoms. Post-mortem showed a healthy state of the intestines. The observation of Thalberg of the occurrence of a condition resembling blennorrhœa supports this view

somewhat, as this condition is probably due to a micro-organism. The value of the eserine in the treatment of this disease probably depended on its effect on the tension of the anterior chamber, as it seems generally to have been employed after the sloughing had taken place. The reviewer's experience teaches him that in certain forms of corneal infection, analogous to those referred to, eserine in the early stage will hasten the corneal disorder, and that an efficient method of treatment is the application of moist heat by cloths dipped in water as hot as can be well borne, for fifteen or twenty minutes at a time, the cloths being changed as fast as they cool. H.]

ARTIFICIAL RIPENING OF CATARACT.

Theobald reports two cases in which he made use of the method of Förster for hastening the cataractous process in partially opaque lenses. In one, the operation was imperfectly performed, and only slight change was produced. In the second, very rapid development of the cataract ensued. In each case, the operation was followed by iritis, with the formation of slight but persistent adhesions. In the discussion which followed, Drs. Gruening and Mittendorf had favorable experience to relate, Dr. Kipp had seen the lens become opaque, but not permanently so, Dr. Knapp had failed to produce any effect on the lens, Dr. Wadsworth's experience was similar to Knapp's. Dr. Noyes had performed the operation eight times. In one very marked iritis followed.—*Amer. Ophth. Society*, 1883. [The method of Förster consists in a sort of massage of the lens. An iridectomy is made, and then, while the anterior chamber is empty, the cornea is rubbed with the angle of a strabismus-hook. The instrument should be employed only in the area of the pupil and of the coloboma. The idea is so to disturb the clear portions of lens-structure in slowly-developing cataracts that the process may be hastened. The value of this procedure, if it accomplish all that is claimed, is apparent. Many patients to whom the loss of many months consumed in waiting for the completion of the morbid process means loss of position and support would be enabled in a comparatively brief period to undergo the operation. The production of the complete clouding of the lens seems to be undoubted. A pertinent question, however, suggests

itself: Is the clouding of the lens-tissue thus produced practically the same as that produced independently by the morbid process? Would this cataractous substance, artificially produced, readily be expelled in the extraction, or would there be considerable danger of cortical substance remaining behind? Then there is the risk of iritis, which seems to be considerable. The method doubtless will be further employed, and practical experience decide its status as a remedial measure. H.]

VASELINE SALVES.

Dr. Seely, of Cincinnati, was perhaps the first one to call attention to vaseline as an excipient in the preparation of the yellow ointment, so valuable in phlyctenular disease. Dr. Theobald, of Baltimore, uses as a basis for ointments for the eye a cerate composed of one part of yellow wax and four of vaseline.—*Amer. Ophth. Society*, 1883.

ELECTRICAL TREATMENT OF INSOMNIA.

BY WILLIAM R. D. BLACKWOOD, M.D.,

Electrician and Neurologist, Presbyterian Hospital; Physician to St. Mary's Hospital.

INSOMNIA presents itself as a factor in many diseases, but more particularly in those of the nervous system. In the earlier stages of insanity insomnia is very frequently met with, and the difficulty in overcoming the condition is very annoying to the physician; in fact, he is usually more troubled about it than the patient is, for, once mental aberration sets in, nothing is more likely to precipitate actual insanity than persistent wakefulness. In many fevers, also, loss of sleep is a prominent symptom and a distressing one, for in certain cases neither opiates, bromides, nor chloral are well tolerated, or, in fact, admissible. I know from personal experience, both in hospital and private practice, that not only injury during the acute stage, but also unnecessarily-delayed convalescence has resulted from incautious administration of drugs to procure sleep, in several types of fever. It is true that we have at our command other methods of tranquillizing a restless patient than drug-soporifics, but none have ever met the designed end with myself so well as electricity.

In relieving *pain* of many kinds, galvanic currents are invaluable, as is well known to any practitioner, and although

the evening restlessness of persons ill with depressing fevers may not be due to actual pain, its results are the same in the end, and the tossing to and fro is just as wearying as though it were accompanied by acute suffering. Electricity applied by the "general" method, as described, will, in the majority of such instances, act like a charm.

My usual plan is to apply *mild* faradic currents with one rheophore over the solar plexus, the other being held by its uninsulated portion in the same hand (the left) of the operator. The whole person of the patient, beginning with the head, is then gently stroked by the right hand of the manipulator, who thus can readily estimate the current strength; and it is better not to wet the hand used. The *sponges*, of course, must be well moistened. Care is taken to avoid painful points, as the brow, lower jaw, and sterno-cleido-mastoid, in the head and neck, but elsewhere the caution is less necessary. The most grateful effects are produced when brushing over the back and the limbs, the sufferer very frequently falling asleep whilst these parts are being attended to. Besides being able to judge the strength and regulate the quantity by increasing or decreasing the pressure of the hand, many of the good effects of massage in soothing the patient are thus obtained: in fact, I have more than once been asked, is not the whole good effect referrible to the simple and grateful friction? That it is not, may be easily determined by experiment, for although sleep may be induced by massage in some persons, it cannot be in others under precisely similar conditions, yet, if electricity be combined with the manipulation, failure will very seldom occur. In some instances where faradic currents would not act I have succeeded by substituting *galvanism*. The application is here made with some modification. First of all the penetrating and diffusing power of the constant current must be considered, and hence all applications to or near the brain are to be made guardedly. Anæmia or congestion at will of the brain is readily produced by galvanism, and although we in a measure desire to obtain the former condition, it is essential not to overdo it. From five to eight cells, therefore, of any battery of the Leclanche, the Law, or the gravity type, will suffice, and the frontal region is better avoided. With one rheo-

phore on the solar plexus (the negative) the anode is applied through the operator, as in faradization, to the vertex and down the neck, on either side (or both at once), thus influencing by the so-termed *central* galvanization the whole sympathetic nervous system, and without necessarily going over the whole body the desired effect is produced. There is no objection, however, to manipulating the other regions, and where much muscular soreness exists decided benefit is thus obtainable.

Except in hospital practice, it will be found inconvenient to employ galvanism, from the difficulty in transporting a good battery, the small zinc-carbon portable concerns being so unreliable. The physician, therefore, should try faithfully induction currents, prolonging the applications to a half-hour or more before giving up or resorting to galvanism. Do not make the very common mistake of substituting powerful for prolonged currents. It is *quantity* and not *intensity* which is required, and so far from attaining the object by an erroneous plan we only render our case less comfortable and defeat the object sought. So soon as muscular contraction is produced, the current is too strong: weaken it. If the patient complains of cramp, tingling, or numbness (pins and needles), he is getting too much: press more gently with the hand, or weaken the coil by its switch- or draw-tube. A current which will produce the crackling of dry cuticle is enough, and if the patient has a moist skin then give only so much as is barely perceptible to yourself: that will be enough. It may seem a waste of time and paper to write of this matter, but as all practical physicians grow older they learn to notice trifles, to depend less upon drugs, and to study every comfort of the sick. In protracted illness the nightly morphia, Dover's powder, or hypodermic becomes intolerable, and any method which may possibly supplant these is of value. Time and again I have had convalescents to thank me gratefully for the change, made, too, at times when from semi-delirium or other condition it was supposed that the patients would not notice such points, but which they remembered when able through returning strength to speak of them.

The skill requisite in electrical treatment of insomnia is very little; the time spent is not a drawback, but, if it is, the nurse,

mother, or other member of the family can take the doctor's place after a little instruction, and every general practitioner should possess a faradic instrument at least, for it comes into play so often nowadays as to be indispensable. Not long ago a professional friend who had been induced to try the method under consideration in a fever case, but who thought the battery a bad investment because so seldom needed, changed his opinion when in a case of an accidental overdose of morphia the person's life was saved by electricity. He owned up that a machine which would either make a wakeful patient sleep or wake a patient comatose from opium *was* worth possessing. Electricity is working its way rapidly into the ordinary needs of the day, and it is a good servant of the physician under intelligent control.

246 NORTH TWENTIETH STREET.

AN ACID SOLUTION OF THE HYPOPHOSPHITES.

BY GEORGE S. GERHARD, M.D.

MR. HAYES, of the St. George Pharmacy, has very successfully prepared, at my suggestion, a solution of the hypophosphites, without syrup, by dissolving the salts in water acidulated with hyposulphurous acid. The addition of a definite amount of this acid prevents the precipitation of at least two of the salts (iron and manganese), which in the syrups is accomplished by the protective power of the sugar.

The objection to the syrups is their excessive sweetness, and their liability to cause indigestion. The present solution, the formula of which I give below, is clear, slightly fluorescent, and pleasantly acid. It is a valuable tonic and stimulant, and is borne by the most sensitive stomach.

Calcii hypophosphit.,	
Potassii	"
Sodii	" āā gr. j;
Quininæ	"
Manganesii	" āā gr. $\frac{1}{4}$;
Ferri	" gr. $\frac{1}{2}$;
Strychninæ	" gr. $\frac{1}{120}$;
Glycerinæ,	℥ij;
Liq. acidi hypophos.,	℥ij;
Aquam	ad f3j.

ARDMORE, PENNSYLVANIA, September 19, 1883.

A NOTE ON THE TREATMENT OF MALIGNANT CARBUNCLE AND BUBO.

BY M. L. NARDYZ, M.D.,
Philadelphia.

THE carbuncle, malignant bubo, and phagedæna are all local inflammatory processes, more or less dependent upon constitutional cachexia. Various causes operating upon the system so as to lower its vitality may be generally discovered by careful examination: in the former, senile enfeeblement, infirmity, and chronic debility from disease, or a condition of habitual repletion and irregularity of circulation, and connected with every species of excess; in the latter, there is the action of specific animal or mineral poison. In such conditions of the system these formidable local manifestations are sometimes developed upon the slightest local irritation. Thus, a furuncle of a young and healthy individual would be a carbuncle in one of an unhealthy character. The bubo of plague and that produced by the flesh of diseased animals is symptomatic of the poison which pervades the system, and the frightful cases of phagedæna which we sometimes witness in hospital practice are in most cases not to be explained by reference to the character or amount of the injury, mechanically considered, and result, therefore, from the operation of some powerfully-depressing cause upon the *vis vite* of the individual.

Of the same description, doubtless, in this respect is the horrible disease termed hospital gangrene and malignant ulcer, of which, however, we know little or nothing from personal observation.

I do not mean by these remarks to underrate the value of local treatment in such cases; it is most essential to facilitate nature's operations; but I mean to convey the idea that the local malady is symptomatic, whether commencing spontaneously or in consequence of lesion, and that calming and supporting the constitutional action is the efficient method of treating such diseases, whether that be done by local or general treatment, or by both. And there can be no occasion to illustrate the fact that surgical local treatment, as the division of structure, the renewal of the surface, is in many cases most influential in accomplishing this great purpose.

The practical objects to be effected, if possible, in carbuncle and phagedæna, are

the arrest of the gangrenous inflammation and the establishment of a free suppuration from the line of separation between life and death. Whenever this can be obtained there is reason to anticipate a favorable issue; and when it fails, and dryness is the condition of the sore, the contrary is to be looked for. A dry carbuncle is invariably fatal, in my experience.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, JR., M.D., PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by LOUIS J. LAUTENBACH, M.D.

CLUB-FOOT TREATED WITHOUT TENOTOMY, BY KNEADING OF MUSCLES AND SUPPORT.

THIS boy has a deformity of the foot: it is one of a group of cases known as club-foot. The inner side of the foot is somewhat flattened, and the foot tends to turn out; if the deformity increases it will probably become a case of calcaneo-valgus. The left leg is the one affected most noticeably, but in neither does there appear to be much loss of power. Besides this defect in the ankle there is a tendency to knock-knee, this being, as it were, a continuation of the same process of eversion; it is, however, not sufficiently far advanced to be of much importance.

Coming now to the treatment, there is here no question of tenotomy, since there is no contraction, at least not such as cannot be overcome by simple mechanical measures; there is no spasm, there is simply a weakness of the muscles and ligaments; and as a result of their want of tone we have the present condition. We must here apply some mechanical support to prevent increase of the deformity, while we endeavor to improve the tone of the muscles by appropriate means.

We cannot, in many of these cases which depend upon infantile paralysis, cure our patients in the sense of restoring motion which is lost, but we can often do considerable good by preventing the deformity getting worse.

In the first place, we will use systematic frictions and kneading to the limbs, to keep the muscles and skin in good condition, and we will supplement this by the use of galvanism.

Our mechanical treatment will consist

in the application of a small pad on each side of the ankle in connection with light iron rods going up from the sole of the shoe, and provided also with a pad on each side of the knee. This is all the treatment that can be usefully applied. It may be possible that a similar apparatus will at some future time have to be applied to the right leg to prevent the development of a similar condition there.

We have here another orthopædic case, one of club-foot, which you will recognize at once as a case of calcaneo-valgus. The foot is everted and the heel is drawn down. Here there is not, as yet, any decided fixation; the case is still susceptible of treatment by the use of apparatus and friction, without tenotomy. If, however, the case goes much longer without treatment, the tendons will become contracted and the foot fixed, and it will then be necessary to divide the tendons of the long and short peroneal muscles, and perhaps those of the extensors of the toes, and even that of the anterior tibial. It would not be necessary to divide the tendo Achillis here, as the heel is not retracted. We find here a curious condition of what is called luxation of a tendon: one of the peroneal tendons is in front of the external malleolus instead of behind it, but slips quite easily into its proper position when pressed upon.

POLYPUS OF THE NASAL SEPTUM—REMOVAL.

Our next case is one of tumor of the nose. It does not look like the ordinary simple nasal polypus, which is the most common form of nasal tumor. The tumor here is attached to the septum, and has a very vascular appearance. Nasal polypi are usually attached to the turbinated bones; they may be attached at any point, but they occur only very rarely on the septum. Polypi are usually of a more or less yellow appearance, and have not the deep vascular tint which this has.

I will try to remove the tumor with the ordinary polypus forceps, and, if I do not succeed with this, will use a small gouge, which is a very convenient instrument for operations within the nose.

Before attempting to remove a nasal polypus you should always satisfy yourself of the exact point of attachment. This tumor is attached to the septum by means of a neck which is rather broad. Here the tumor is clasped comparatively easily

by the forceps, and on twisting the instrument the mass of the tumor comes out, its deeper parts looking more like the ordinary nasal polypus than the part which was seen in the nostril. Examining the nasal cavity further, as usually there are several polypi present, we find that we have no more tumors to take out.

Besides the ordinary nasal polypus, which is usually a myxoma, though sometimes an adenoma, there is occasionally a firmer growth met with in the nose, which is called a fibrous polypus. This is a comparatively rare tumor, and in some cases which I have seen has been of a sarcomatous nature. The tumor in this case is firmer than the ordinary polypus, and probably contains glandular tissue, so that it might be called a polypoid adenoma.

WHITE SWELLING OF THE KNEE.

This boy represents a class of joint-diseases of which we see a great many. He has been under treatment a long while. It is a case of disease of the knee-joint known as gelatinous arthritis, or white swelling. It is a case which may some day require more active measures than we have as yet adopted. Many of these cases, if not carefully treated, eventually require either excision of the knee-joint or amputation above the knee. Excision does not do well in very young children. The operation should not be done, if it can possibly be avoided, in children under nine or ten years of age, as the results usually are not very satisfactory: sometimes you fail to get bony union altogether, and if you do get bony union there is apt to be considerable deformity, owing to the restlessness of the patient.

Another risk which follows the operation of excision in young children is that of recurring deformity. Of this I have seen two cases in my own practice. One case of recurring deformity after excision of the knee was in a little girl six or seven years old, who went out from the hospital with a straight knee which appeared quite firm, but she came back some months afterwards with considerable deformity. In that case I used a posterior splint and an elastic bandage, which restored the limb to its proper position. The second case was in a girl eight or nine years old, who also went out from the hospital with a limb straight and apparently firm. I lost sight of her for about ten years, when

she came back with the limb very much contracted, the leg making an angle of about ninety degrees with the thigh. Bony union had occurred in this abnormal position, and it was found necessary to perform a re-excision. These reasons make me hesitate about recommending an operation in young children if it can be avoided.

If, in a case of this kind, in a child, you find much deformity, you may divide the hamstring-tendons subcutaneously, then straighten the limb as much as possible, and use the plaster-of-Paris bandage to keep it straight. This will put the part at rest, and at least prevent the disease from getting worse.

In using the plaster bandage, you should first pad the knee well with cotton, and then carry a flannel bandage from just above the ankle to more than half-way up the thigh, in order to fix the bones above and below the joint and thus to prevent motion of the articulation. Now on top of this you apply a bandage of crinoline or mosquito-netting having plaster of Paris within its meshes. Before applying this it is soaked in water, and then the superabundant water pressed out. The fixing-power of the plaster may be supplemented by adding strips of pasteboard or wood, or, better still, of metal,—especially of perforated zinc or tin,—so as to prevent their slipping. Over these strips put a second plaster bandage, and then keep the limb straight until the plaster has set.

RACHITIC CHILD.

This child has just been brought to us for the determination of the question whether any mechanical apparatus can be of use, and, if so, of what kind. The child cannot hold its back straight. There is a deformity of the chest; the breathing at times is attended with great oppression. The child is suffering with rachitis. The contour of the breast is very characteristic: there is a drawing in of the lower part of the breast, and a curvature of the back which is distinct from other forms of curvature. This is not as marked when the child is standing up as it is when he is sitting down, as while standing he puts the muscles in action. He has an antero-posterior curvature which is very different from the antero-posterior curvature of Pott's disease, or caries of the spine. Here we have a general curvature,—an exaggeration of the natural curve. In young children the ordinary S shape of the spine

is not observable, this coming on later in life from muscular action. In children the whole back is normally convex, but not as much so as here. There is also here a tendency to lateral curvature; this is simply from weakness. The child braces itself, when sitting, by supporting itself on its palms. The spine is convex to the right in the lumbar region, and convex to the left in the thoracic region. The lateral curvature is due to the rotation of the vertebræ on themselves, from the weakness of their ligaments. The other symptoms of rachitis are not as well marked here as we sometimes see them. The epiphyses of the long bones are often enlarged, giving a double-jointed appearance which is not well marked here. We have here, however, a tendency to "beading" of the ribs, which is especially well marked at the junction of the ribs with the cartilage. Sometimes there is a complete row of beads on both sides. This, when present, has been termed the rachitic rosary. The teeth in these cases are nearly always deformed.

The most important remedy in these cases is cod-liver oil, which may be given freely. This is of more value than all the braces and splints that could possibly be used. English surgeons use a great deal in these cases the *hydrargyrum cum cretâ*, or gray powder, and claim for it great value. Some preparation of mercury may be at times necessary, and if it becomes so you may use small doses either of gray powder or of blue mass; but the continued use of remedies of this kind is not to be recommended. In addition to the cod-liver oil the child should have good food and exercise in the open air, but especially passive exercise. In addition, a light spinal support should be applied, with a view simply of preventing the occurrence of deformity while the general condition is being improved. The important measures here consist in general constitutional and hygienic treatment; the use of apparatus is a secondary matter. In some cases, however, where there is a tendency to bow-legs, it is very important to use apparatus at an early period.

FOREIGN BODY IN TRACHEA—REMOVAL BY TRACHEOTOMY—DIFFICULTY OF BREATHING WITHOUT THE TUBE.

This young child, a boy, was admitted in a condition of extreme danger from the presence of a foreign body in the trachea. It was a case which required prompt and

immediate treatment, which consisted in opening the trachea, when two foreign bodies—portions of a grain of corn—were ejected. Since then the child has had a slight attack of bronchitis, but has done perfectly well, except that he has not been able to dispense with the tube.

This might be owing to the presence of a foreign body in the larynx; but I think that it is due to the fact that when the tube is removed the tissues of the neck are sucked in, closing the trachea as by a valve. If by laryngoscopic examination we should be able to determine the presence of a foreign body in the larynx, it should be, of course, removed; but if a laryngoscopic examination cannot be satisfactorily made, we will etherize the child and remove the tube, watching closely in order to discover whether there is any real mechanical obstruction or whether the difficulty is due to spasmodic action. Perhaps when the child comes from under the influence of ether he will not notice that the tube is gone, and we may then be able to dispense with it. This tube here is the ordinary fenestrated tube. Immediately after the operation we used a silver tube, not fenestrated; but after this had been worn a little while the fenestrated tube was substituted for it, so as to allow the passage of air through the larynx.

TRANSLATIONS.

THE MODERN RADICAL OPERATION FOR HERNIA.—Dr. H. Leisrink has recently attempted the collection and analysis of all the published radical operations for hernia, his statistics covering 390 cases, many of which were personally communicated to him and are otherwise unpublished. His cases are divided into two groups, those in which strangulation had not occurred, and those in which the operation was undertaken for its relief.

In the first group he reports 169 cases of inguinal hernia (153 in males and 8 in females), 25 femoral herniæ (2 in males and 23 in females), 8 navel and abdominal herniæ (4 males and 4 females), in all 202 (79 per cent. males, 17 per cent. females). In the second group, where strangulation had occurred, there are 103 cases of inguinal hernia (74 males and 26 females), 77 femoral herniæ (11 males and 66 females), 7

navel and abdominal herniæ (3 males and 4 females), and 1 case of obturator hernia; in all 188 (46 $\frac{2}{3}$ per cent. males, 51 $\frac{8}{9}$ per cent. females). Operations for fæcal fistula and resection of the intestine are not included in these statistics.

In the first group the operation was successful in 184 cases (91 per cent.), 15 died, and of these sepsis was the cause of death in 9 (4 $\frac{1}{3}$ per cent.).

Inasmuch as the author reckons that at least twenty-one days are necessary in herniotomy for healing by first intention, it follows from his tables that in 44 cases (21 $\frac{3}{4}$ per cent.) complete asepsis of the wound was not obtained. In the great majority of his cases the time for which the patients were under observation after the operation was far too short to exclude a return of the disease, while in 20 per cent. of the cases a return was reported; but in many of these the condition of the patients after the operation was much better than before. The mortality, however, in this operation is so large that the author believes that in cases in which reduction can be maintained by trusses, as well as in children and old persons, the operation is not advisable.

In the second group, where the operation was performed for strangulation, cure resulted in 155 cases (82 $\frac{1}{2}$ per cent.), while death occurred in 33 cases (17 $\frac{2}{3}$ per cent.), and of these in 6 instances (3 $\frac{1}{6}$ per cent.) from septicæmia.

The duration of the strangulation, as might be expected, was of great influence on the result: thus, in 23 cases in which the operation was performed within fifty hours after the onset of strangulation, only 2 died (8 $\frac{2}{3}$ per cent.), while in cases of longer duration 7 (33 $\frac{1}{3}$ per cent.) died.

The hernia returned in only 8 $\frac{1}{6}$ per cent. of the cases. The indications, therefore, are, when there are no special reasons against opening the peritoneal cavity, to perform the radical operation immediately after the relief of the strangulation.

As regards method, the author advises the slitting of the canal, extirpation of the hernial sac, and occlusion of the ring by stitching, while he is opposed to Czerny's method of ligature.—*Centralblatt für Chirurgie*, July 28, 1883.

A FÆTUS REMAINING FIFTY-SIX YEARS WITHOUT CHANGE IN A CASE OF EXTRA-UTERINE PREGNANCY.—M. Sappey, in a

very interesting communication to the Academy of Sciences (*Courrier Médical*), reported a case that is probably without parallel in medical annals. A woman at 28 years of age became pregnant, but was not delivered. She carried an abdominal enlargement until she died at eighty-four years. At the autopsy a large tumor was found outside of the uterus, connected with the right Fallopian tube. The wall of the cyst was tough, and its surface calcareous and nodular. After removal the cyst was divided with a saw, and, very much to the surprise of the spectators, a fœtus of about seven months' development was found in its interior. During its long captivity it had been perfectly preserved, not having undergone any alteration. "It was in the ordinary attitude, the limbs flexed upon the trunk, the head inclined on the thorax. The pupillary membranes were completely developed, and fixed the age at from six to seven months. The cutaneous envelope, the superficial organs, as well as the viscera in the large cavities of the body, all the muscles and soft parts, retained their consistence, their suppleness, and their normal color. The fœtus, in short, presented all the features of an infant which had just gone to sleep." This case alone upsets the ordinary views with regard to the calcification and desiccation of the fœtus being necessary for the preservation of a fœtus retained in the abdominal cavity. According to Sappey, "infants which after their death are retained indefinitely in the abdomen of the mother owe their preservation to the physical conditions of their imprisonment, which give them a refuge from atmospheric germs."—*Gazette Médicale de Nantes*.

NEW THEORY OF THE ORIGIN OF BACILLI.—Bouchardat, at the last meeting of the Paris Academy of Medicine, denied the specificity and contagion of the so-called tubercle-bacillus. He attributes these organisms to a fault of nutrition, as the result of which leucocytes acquire the power of transforming themselves into pathogenic bacilli.—*Berliner Klin. Wochenschrift*.

THE NEW ANTIPYRETICS.—From some experiments made by Silvestrini, in Parma, he concludes that he is warranted in expressing some doubts as to the asserted indisputable antipyretic powers of kairin and resorcin.—*La France Médicale*, No. 43.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 3, 1883.

EDITORIAL.

THE NEED OF GOOD NURSES.

AS the art of medicine becomes more highly cultivated, the importance of the care of the sick, and of the hygiene of the sick-room, is gradually assuming a higher relative position in the minds of the profession. It is seen that the most successful practitioner is not necessarily the most scientific pharmacologist, but he who knows best how to order all things for the good of his patient; the most successful surgeon, not necessarily the most expert operator, but he who looks carefully after his patient both before and after the operation. In order that a physician may be well seconded in his efforts to keep up the hygiene of the sick-room to the proper standpoint, he must have an able and intelligent *locum tenens* in the nurse, who will not only see his instructions faithfully carried out, but will have sufficient knowledge and skill to anticipate and prevent transgressions which the physician may not have anticipated or could not foresee, yet which might otherwise be followed by serious if not fatal consequences. How many illustrations might be given where indiscretion or disobedience on the part of the patient or his care-taker has been followed by irreparable injury! The medical attendant in a dangerous case feels his responsibility, or at least his anxiety, immensely reduced when he knows that he has an expert and trustworthy assistant remaining near the patient, who can be relied upon to do his bidding in his absence. Prof. Gross, in a recent communication, sums up the character of the ideal nurse as follows:*

"The chief qualities of a nurse are perfect health, refinement, neatness of person, correct habits, kindness of heart,

patience, power of endurance, a good temper, a discreet tongue, good judgment, and alertness of mind. Such a combination of qualities is rare, but where it is present, and has been improved by a rigid course of training, it fulfils the very highest requirements of the sick-room. Endowed with such an array of gifts, a nurse is capable of doing an amount of good in combating disease in a degree hardly inferior to that of the medical attendant himself. She diffuses light and courage and sympathy in all her acts and movements, and thus robs disease of half its fears and pangs."

It needs but little reflection to show the value to the practising physician of a supply of such trained and trustworthy nurses drawn from the better class of society. It is therefore desirable that this vocation should be elevated to a higher position in public and professional esteem, in order that persons of refinement and good breeding may be encouraged to adopt it as a means not only of earning a respectable living, but also of rendering the most valuable service in their power to humanity. Among persons naturally devoid of these necessary qualities of tact and refinement, a little training, unfortunately, seems only to render them self-sufficient, obtrusive, and generally offensive, glossing over their native inefficiency with the merest presumption of knowledge. The sick can be spared from the officiousness of such care-takers only by the determined attitude of the physician.

Prof. Gross recommended, in a well-considered report upon the subject, made to the American Medical Association in 1869, that district schools of nursing should be established under the auspices of the County Medical Societies, the members of which might deliver lectures upon the science and art of nursing, including the elements of hygiene and other necessary information. At the last meetings both of the American Medical Association and of the Pennsylvania State Medical Society, he again called attention to this important subject, and offered resolutions, which were unanimously adopted, recommending the establishment in every county town in our States and Territories of schools or societies for the efficient training of nurses; male and female, the members of the

* Medical News.

County Societies giving instruction either gratuitously or at such reasonable rates as should not debar the poor from availing themselves of their benefit.

In the words of the author of the resolutions, "trained nursing is rapidly assuming the form of a dignified profession. It is no longer a menial occupation, but an art and a science." So much importance does he attach to the plan he has proposed, that he declares he shall feel, if it succeeds, as if he had accomplished the greatest work of his life.

There has been, within a few years, a great revival of public interest on this subject in Europe, chiefly owing to the influence and efforts of Prof. Esmarch in Germany, the Princess Christian in England, the Society of the Red Cross, and the St. John's Ambulance Association: numerous Samaritan Schools have been organized, and courses of lectures have been delivered. It is true that these have had in view principally the rendering of first aid to the injured, and the treatment of emergencies; but the result has been to direct public attention pointedly to the care of the sick and injured. A society of this kind in New York has been engaged for more than a year in establishing branch societies throughout that State. Public lectures upon Emergencies, under the auspices of the Philadelphia Society for Organizing Charity, have been delivered, with great benefit to the public, in this city, of which the nurse-training schools have already a well-earned reputation. The present time seems a favorable one for extending these advantages to other places throughout our State and country. There cannot be too many good nurses; indeed, it is doubtful if the supply will be able to keep up with the demand when the community once learns to appreciate fully the value of the services of skilled attendants, whose judicious aid is always welcomed by the physician.

THE CELEBRATION OF THE HARVARD CENTENNIAL AT BOSTON.

THROUGH the well-directed liberality of some of Boston's principal citizens, a fund of three hundred thousand dollars was contributed for the purpose of providing a new building for the medical department of Harvard University. The gift was doubly welcome, being in recognition of the valuable services which this school had rendered to the community by its labors in the direction of higher medical education, and because the institution had outgrown the inefficient accommodations formerly provided for its purposes. The school having finished a century of usefulness, it was thought by its friends that the occasion could not be celebrated in a more fitting manner than by erecting a new Medical Hall, with lecture-rooms and laboratories fully equipped and adapted for the best methods of modern instruction.

The formal opening and dedication of this handsome building constituted part of the exercises of the celebration of the one-hundredth anniversary of the foundation of the medical school of Harvard University, held October 17, 1883. Cards of invitation were sent to distinguished members of the profession in other cities, a large number of whom were present, including Sir Lyon Playfair and Sir William MacCormac, of London, Dr. Osler, of Montreal, Dr. Mullin, of Hamilton, and Dr. Aiken, of Toronto, also many prominent American physicians.

The opening exercises were held at Huntington Hall, in the Massachusetts Institute of Technology, beginning at eleven o'clock A.M. by a brief address from President Eliot, who introduced Dr. Oliver Wendell Holmes, Emeritus Professor of Anatomy, the orator of the occasion. Dr. Holmes gave a short account of the early history of the medical school, followed by some personal reminiscences of his own college days, and of the distinguished men who had formed its Faculty at different

periods. He spoke of the progress made in the art of medicine within the last third of a century, and of the gradual growth of a knowledge of the true principles of medical science and of a healthier sentiment with regard to the relative value of drug-giving and hygiene. The address abounded in witty allusions, which were well relished by his audience, and his remarks were frequently interrupted by applause.

After the oration was ended, there was a presentation of a life-size painting of Dr. Holmes, in his professional gown, to the medical school, by Dr. Francis Minot in behalf of the donors, and of a marble bust of Henry J. Bigelow, by Hon. Samuel A. Green in behalf of the donors. They were accepted by President Eliot, who in the name of the University thanked the unnamed friends for these valuable mementos.

At this point in the proceedings Dr. J. Collins Warren, chairman of the Committee on Arrangements, invited the guests to repair to the new medical hall, on Boylston Street, near Exeter, where the remainder of the programme was carried out.

On entering the front door of the large and ornate building which hereafter is to be known as the Hall of the Medical Department of Harvard University, the visitors found themselves in a spacious vestibule surrounding the grand stair-way: upon these steps, about half-way up, the Faculty, with a few friends, formed a group, among which was the Rev. Andrew P. Peabody, D.D., who offered a brief prayer. President Charles W. Eliot, on behalf of the corporation, then, in a few words, formally dedicated the building to the purposes of medical instruction. Addresses were also made by Henry Lee, Esq., in behalf of the contributors, and Prof. Henry W. Williams, in behalf of the medical Faculty. A general reception was then held by the medical Faculty, and the subscribers to the building-fund, with the invited guests, partook of a fine collation. The Warren

collection and other valuable specimens in the museum, and the various laboratories, were thrown open for inspection.

The building is of fine brick, well lighted, well ventilated, and fire-proof in construction: it was described by our Boston correspondent in our last issue. It seems in every way well adapted for the purpose to which it has been dedicated. No extravagance of architecture mars its usefulness for teaching, nor, on the other hand, is there any evidence that ugliness has been mistaken for utility.

In the evening a reception to the invited guests was given by the Faculty at Young's Hotel.

The weather, the occasion, and the address of Dr. Holmes were alike inimitable. Of Harvard, for the sake of the practical solution she is rendering of the problem of higher medical education,—and of all enterprises of similar character, wherever in this broad land they may be located,—we can heartily say, *Esto perpetua!*

CLINICAL TEACHING AT THE UNIVERSITY OF PENNSYLVANIA.

IN the notice of medical teaching in Philadelphia, contained in our last issue, the list of the Faculty of the University of Pennsylvania is incomplete: it should have contained the names of William F. Norris, M.D., Clinical Professor of Diseases of the Eye; George Strawbridge, M.D., Clinical Professor of Diseases of the Ear; and Louis A. Duhring, M.D., Clinical Professor of Diseases of the Skin, all of whom have been teaching at the University for many years.

Prof. Horatio C. Wood, M.D., is Clinical Professor of Nervous Diseases, as well as Professor of Materia Medica, Pharmacy, and General Therapeutics. This clinical course, with practical bedside instruction, likewise, in Medicine, Surgery, and Gynecology, is made a special feature of the third term of lectures.

NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

AS the schools have settled down to their winter's work, it is proper to devote this communication to a consideration of their methods. There are three regular medical colleges in this city. The Medical College of Ohio is the oldest, and is the only one at present a member of the American Medical College Association. The number of students in attendance this year is not quite three hundred, but the students in this, as is also the case with the other colleges, are not all in yet. There has been an advance in the requirements for graduation, so that now, in addition to the Association requirements, all students are required to attend hospital clinics each year of their attendance at college, and each student is required to dissect each of the three divisions of the cadaver.

This college pays special attention to its out-door clinical department. There are six clinics in daily operation, in which an average of over two hundred patients daily are treated. The students are here permitted to handle the patients, to make physical examinations, and to diagnose the cases. Two or three students find work as assistants in each of the clinics, thus bringing them into more intimate relations with the work. The practical courses in chemistry, histology, and pathology are well attended, each year increasing the number of students taking these extra branches. Then there are private quizzes, classes in physical diagnosis, in ophthalmology, in laryngoscopy, in operative surgery, and obstetrics. During the year several cases of obstetrics are brought before the class in the large amphitheatre for practical demonstration of the process of parturition. This college has complete control of the Good Samaritan Hospital.

The Ohio Medical College was founded in 1819, making it one of the oldest colleges in the West.

The Miami Medical College ranks second in point of numbers,—it having not quite one hundred students in attendance. The inducements offered here are very similar to those at the Ohio. The Faculty, not having any hospital of their own, pay especial attention to the large City Hospital. Their out-door clinics have been recently extensively enlarged and a set of intelligent young men placed in charge. Their practical departments consist of anatomy, chemistry, and histology: at the head of each is placed an active, qualified young man who carries much enthusiasm with him into his special department.

The Cincinnati College of Medicine and Surgery has had rather a variable career. It is the second oldest college in the city, and until recently has been conducted as a first-

class institution, but its chief value now seems to be as an advertising medium for the Faculty. It has not a half-hundred students in attendance, and, as the tuition is only thirty-five dollars (the tuition in the other schools is seventy-five dollars), it cannot in any sense adequately pay money to its Faculty. Some of the most prominent members of the Faculty reside outside of the city in neighboring towns and villages, and for them it is quite a big thing to come into the city twice a week to lecture,—and it doubtless adds not a little to their local fame.

In addition to these three regular colleges, there are four irregular: two of these conduct lectures from five to eight months in the year, a third has lectures occasionally, and the fourth is simply a diploma-mill.

From all of these institutions, about two hundred graduates are poured out each year, about half of whom come from the Ohio Medical College.

If the hospital and clinical material were well utilized, two good colleges could be well supported; but I fear the multiplication of colleges comes from the selfish desire to be a "professor," instead of honest "doctor."

The Cincinnati Hospital ranks first in size. It contains five hundred and four beds, arranged in eighteen wards. The hospital is an imposing structure, architecturally speaking, and is built around a hollow square in a way to afford in each ward ventilation from the four points of the compass.

There is an amphitheatre at one end of the hospital, capable of seating three hundred students, where clinical lectures are delivered by the staff six mornings in the week for five months, while the colleges are in session. Students from any medical college in the city can attend these lectures by paying five dollars, which amount goes into the hospital library fund.

No bedside instruction is allowed in this institution, and, as a consequence, while our citizens pay eighty thousand dollars a year for a hospital, but little good, clinically speaking, accrues to the medical students of the city. Six resident physicians are chosen each year by competitive examination to serve for one year without salary. They are furnished lodging, washing, and board by the hospital, and are under the direction of the medical staff. They rotate in service, so that in the year they get four months in the medical wards, four months in the surgical, two months each in the obstetrical and ophthalmological. These six internes really get all of the clinical instruction which this great hospital affords. Two or three members of the staff have overstepped the rules and take small classes through the wards once or twice a week, but they do this only at the risk of having their official heads cut off. There is probably less clinical material utilized in this hospital, in proportion to the amount present, than in any

other large hospital in the civilized world. As a consequence, numbers of our students are driven abroad yearly to get what is denied them at home.

The Good Samaritan Hospital is under the charge of the Faculty of the Medical College of Ohio. It contains nearly two hundred beds, including the Marine's. The best and largest clinical amphitheatre of the city is in connection with this hospital, and only students of the Ohio Medical College are admitted. Bed-side instruction is also here a secondary matter, although it is better utilized than in the City Hospital. Many of the Faculty of the Ohio Medical College send their private operating cases here, so that the number of major operations here is about equal to the larger City Hospital. Three internes are selected from the graduating class of the Ohio Medical College each year to serve for one year in this hospital on nearly the same terms as the City Hospital internes.

The St. Mary's Hospital contains two hundred and fifty beds, and is not connected with any medical college. The staff is composed of eight distinguished medical gentlemen of the city, headed by Charles S. Muscroft, Sr. All of the nursing and inside attendance is done by the Sisters in charge, and Dr. Muscroft assures me that it is well done. The clinical material of this large hospital is not utilized at all in the way of the instruction of students.

There is also a Jewish Hospital in the city, containing about seventy-five beds, but it is not thrown open to the public in any way.

Thus it can be readily seen that while there must be an abundance of clinical material in the hospitals of Cincinnati, yet it is utilized in about the poorest possible manner. Tens of thousands of dollars are thus driven to Europe each year which could much more profitably be expended here, were things not as they are, but as they should be.

A. B. T.

CINCINNATI, October 15, 1883.

CORRESPONDENCE.

LONDON LETTER.

THE work of another session has commenced at the medical schools, which in London, at least, start with a reasonable number of subjects for dissection, in which there has been an unfortunate scarcity of recent years. But the parochial undertaker has been checkmated at last, and mock relatives are at a discount; and the corpses of our social failures are more useful after death than their owners were in life. Anatomy is going to have a full swing this year. The introductory addresses have been delivered at the different schools, and are scarcely of a very high order of interest. Still, such ad-

resses have a value, and an abstract of some of them may be of interest. At St. George's Hospital the address was given by W. H. Bennett (Assistant Surgeon), in which he considered "The Social Position of the Medical Profession." He compared it with that of the church, the army, and the law. With regard to the first two, he held they possessed attractions which medicine could never attain. He held the law to have more allurements. He quoted from a writer of high social standing, "This choice of a profession is not an easy matter, when, as a rule, the church, the army, the bar, and the diplomatic service are almost the only four professions open to a young fellow." Medicine is conspicuous by its absence. (How different it is on your side of the water, where the ranks of medicine contain scions from some of your best families!) He went on to say the law was patronized far more freely by society of a certain rank than was medicine. For this he thought there were two main reasons. The first was that a certain portion of our work was of a "menial" kind, and repulsive. Especially was this last connected with the early part of the educational career. The other was that a medical man was never free from the fetters of his business, and was constantly at the call of the public; while the recognition of medicine by the State was very small. Then, of course, the "political powerlessness of the profession" came in for recognition. He then discussed the position of consultants, and said, "For there could surely be nothing more lowering to the social standing of the profession than commercial competition between those who should be its leaders and those who formed its general working body." At King's College, Dr. Acland, F.R.S., insisted upon something more than "a wholly secular and materialistic education." For reasons which he need not then relate, the Medical Council had abstained from entering upon this stormy topic in its recommendations on general education; but, in his opinion, the importing religion into scientific teaching was fraught with danger both to religion and to precise knowledge." Certainly the introduction of a religious sisterhood into the working of King's College Hospital has been fraught with disaster, if that has anything to do with the question. At St. Mary's Hospital the address was delivered by that respected veteran of the profession, Dr. Handfield Jones, which was mainly of strictly local interest, relating to the school and its history and prospects. At the Middlesex Hospital, Mr. Pearce Gould referred to the recent Royal Commission as to the profession and the late Bill. He sat upon the corporations "which have degraded the profession and have deceived the public." (Those naughty corporations, which, amidst scorn and condemnation, live on, pretty much after the theory embodied in a North-country proverb,—viz., "The devil

gives long leases to those he is sure of"). He then pointed out how much had been done of late years as to the localization of disease and the local effects of disease, but warned his hearers not to be tempted to devote an undue amount of time and attention to these matters, to the exclusion of general pathology. At the London School of Medicine for Women Dr. Horatio Donkin selected as his topic "Popular and National Therapeutics,"—just about the last subject one would imagine to choose for the ladies. "To the treatment of symptoms as if they were diseases might, indeed, be referred almost all forms of quackery in medicine," he told the gentle sex. But how to treat softening tubercle, for instance, without "treating symptoms," as it is called, for the life of me I cannot tell. If one cannot wrestle with some of its constitutional effects, what can one do for the hapless patient? But, however, it is not my duty to be judicial. At Queen's College, Birmingham, the address was delivered by Bennett May, F.R.C.S., and at Owen's College, Manchester, by Professor Arthur Gamgee, F.R.S., who pointed out how Owen's College had been united to the Manchester School of Medicine. He then described the position in which they stood to the new Victoria University, an examining and degree-conferring institution. Prof. John Tweedy, at University College, pointed out with pride the roll of illustrious names from (my kinsman) John Elliotson downwards. He insisted they must be medical men first and University College men afterwards. He gave his hearers some sound practical advice about how to pursue their studies in the most profitable manner. At this point he insisted upon the importance of maintaining the health during the years of study. As to the practitioner, he quoted Guy of Chauliac: "A surgeon should be learned, expert, ingenious, and well-mannered; he should be bold when sure, cautious in danger, kind to patients, gracious to colleagues, modest in giving an opinion, chaste, sober, pitiful, and merciful, and not greedy of gain,"—which shows that old Guy knew very well what was desirable in a surgeon; and I trust a goodly proportion of Mr. Tweedy's audience will strive to live up to this high standard. By far the most original and interesting address was that delivered at the Leeds School of Medicine by T. Clifford Allbutt, M.A., M.D., F.R.S., the well-known physician of that town, on "Medical Study and Practice." He began by referring to the freedom attained on leaving school for a calling, which, he said, tempted to extravagance, which their professor of physiology would tell them was that waste of power which may be but a condition of new growth. "O young men, why will you buy your experience so dear, when we are crying wisdom in the streets for naught? Let us who have passed your day never have to look with sympathetic

sadness upon opportunities unseen, upon chances slipped away, upon time wasted and wasting you again, upon squandered wits and powers dissipated." Then as to the want of organization in the profession. "If organization is to mean the dictation of creed-mongers and the suppression of all intellectual variety, then I for one am content to be disorganized. If political power means the setting up of some medical semaphore in one or other House, who may consent to utter only our shibboleths and take from us his sole political color, then I for one am content to be politically powerless." He then spoke of the position of the "general practitioner." "Did the members of any other profession ever seek odium, and even rancorous enmity, by persistent efforts to cut down their own incomes in the interests of their clients? To speak plainly: enteric fever, for instance, was worth perhaps a steady hundred a year to many a town or country practice,—not counting the luck of epidemics. Now, hundreds of doctors—you know many of them yourselves—in human pity have striven to suppress this and other maladies, spoiling their own incomes, and earning, not the thanks, but even the curses of the public; offending not the poor, but the rich,—the landlords, the thriving farmers, the Poor-Law Guardians,—the class upon whom the rest of their shrunken practice must depend. Again, in the quiet heroism of daily life these same men and their brethren labor day and night for sick and suffering persons who can never repay them with money. Some walk in the squalid and hideous places of large towns, others among the poor widely scattered over moor and fell. I said to one of these, as I pointed to a vast mountain-side deep in snow, 'How do the poor fellows up there get aid in winter?' 'Oh, we have to go somehow,' he cheerily replied. 'And how are you ever paid for such labor?' 'Never,' he said. 'But there is no doctor for seven miles on that side, for five miles on that side, nor even for ten miles on the other; and if an old chap gets a strangulated hernia in the middle of the night up there, one is bound to go.' I silently took my first-class seat in an express-train homeward, with a check in my pocket, thinking, 'And these are the men who are called the "lower grade" of the profession, and who are not fit even to vote for their own Colleges of Physicians or Surgeons!'" Then he went on, "Such, then, is the body of men in which you are to be enrolled,—men who would not be human had they not faults also. Let me warn those of you now entering practice against some of these. Our worst fault is, I fear, that we are a somewhat touchy and jealous class. Our cousins at the bar set us a contrary example, to our shame. We work under conditions which tend to breed distrust. Unlike the bar, we do not play with our cards above the table. In our more intimate work

it is terribly easy for one doctor, by little intangible tricks, to elbow out or depreciate another. Then, for the same reason, the public often fail in loyalty and candor with us, and work mischief in their own little ways. Difficulties would often be avoided if we were not too often disposed to assume some property in our patients, and to think because they come to us at times they have no business at other times to consult some other man. It is not fair to put business of any kind into the hands of two men at once without a due understanding between them. But we must not go beyond this and say that a man has no right to consult whom he pleases and deny his right to be the judge of his own interests." As to calling of consultations, he said wisely, "I find it is the best men who seek consultations, and the less capable and those more ignorant of the world who shirk them. How clearly men who have been in practice realize this! but the young beginner does not see it." Then he urged them if they have any grievances among themselves never to write letters to professional brethren: "Charges are thus made without reserve; words easily used on paper which would have lingered on the lips, but which cannot be recalled; the favorable influence of man on man is lost, and a lifetime may hardly hold mischief, which in a personal interview would have gone piping down the wind. Medical etiquette is good behavior, and our rule the golden rule of doing as we would be done by,—of acting candidly and considerately towards ourselves and towards the public. Looking only to the happiness of our lives, what more fatal poison can you have in your cup than a chronic ill humor? What more irksome way than to meet your medical brother daily in the street with sulky look or neglect? An ill-bred fellow once told me it was the doctors' wives who kept their husbands so often at loggerheads,—a fellow whom I need not say that I have no hope of, and whom I only name to reprobate. As to your patient, put yourself in his place. What you calmly regard as an incident of your daily work is to him, perhaps, the life of a parent or a child. If he lose his heart in his fear, small blame to him; if his alarm or agitation lead even to some hasty and irregular action, I say again, put yourself in his place. He does not know, as you do, either your cleverness or the vanity of his fears. A cripple more or less, a gravestone more or less, is nothing to the solar system, but it is all the world to him. A doctor is no less liable than another man to be called upon to explain himself, and the ruthless test of cross-examination has taught us to distrust big words and feel that if we cannot make a thing clear to an intelligent layman, then we do not know it ourselves. A shake of the head and a dark allusion to the liver will not now satisfy an intelligent patient, nor ought it

to do so. Avoid infallibility. There is no better test of a man's knowledge than his neat delineation of the shore-line of his ignorance. As a rule, a patient calls on you for information as well as skill; and, while you are incapable of brutal frankness, your sympathy will be wise enough to teach you to give your opinions candidly and clearly." Then, turning to the matter of medical study, he said, "The best doctor is the best artist, and the best medical artist is the master and not the servant of his sciences. Those practitioners who complain that we turn out men nowadays who possess wide scientific knowledge but are no medical artists, have right with them. They feel that a less learned assistant gains with them a facility in dealing with exigencies which puts the much-pondering prizeman to shame in the sick-room. Able and well-meaning young men get lost in the faddy therapeutics so much in fashion to-day; and while balancing the hourly drop of digitalis against the half-hourly half-drop of aconite, they vacillate and lose time, if they do not miss altogether some broad features of their cases which would have been plain enough to their father's surgery-boy. I will be bold enough to question whether a doctor may not think too much about his cases."

"A nice old lady once told me her doctor was so precious to her, he lost, indeed, his sleep of nights in thinking over her symptoms. I strongly suspected that doctor to be a lying humbug. So important are the intuitive appreciation of the main factors in a case, the relations between them, and their tendencies, that, without these, reliance on those facts which are at once more precise and more limited may be positively misleading. Students and young practitioners rely, as a rule, far too much on their preciser data, and so far the discovery of instruments of precision has some temporary disadvantages. Because they find albumen in some urine which measures up to a substantial quantity, they cry out, Bright's disease! or sugar, and they cry out, diabetes! or a patient who has had a stationary mitral murmur for years, and may have it for many more, comes to the doctor, who applies first a simple stethoscope, then tries to get to the inner meaning of it with a double-barrelled one, and forgets the while that it is not the instrument but the man at the rear end of it which counts. All his mind, however, he sends down the tube, and leaves none for the patient's own story, none for an estimate of the tone of the circulation in the several organs, none for the contours of the chest and its districts, none for the many little common-sense probable inferences which the case should offer him. He rushes to the alarm of heart-disease in all its terror, which, if not literally, is practically true." (How accurate Dr. Allbutt's statement here is the writer is in a position to know.) He continues: "Now,

gentlemen, not in heart-disease alone, but in the whole field of medicine there is no exact datum of any instrument of precision—nay, not even of the thermometer—comparable in value to the inexact suggestions of the radial pulse, taken not by the sphygmograph, but by the erudite finger. In enteric fever, for instance, the qualities and fluctuations of the pulse are far more trustworthy signs than the variations of the temperature. Take away from me my instruments of precision, and you cripple me; deprive me of my touch of the pulse, and you blind me.” Then he puts in a kindly word for the dunces of the school. They have to be looked after by class-rolls and weekly tests. They cut a poor figure at the College of Surgeons, but, although some may be dullards, the majority are not so; they mature later, and attain a solid success, while retaining a cheerful, hopeful, manly disposition which attaches and invigorates their patients. “A country practitioner once drove me ten miles to see a patient, and on our way he discoursed me as ably on the geology of the district as upon the difference between a reef-knot and a granny, and upon the true construction of a claret-cup. I knew he must be an admirable doctor, and I strongly suspect that in years gone by he was a dunce.”

Oliver Wendell Holmes evidently does not stand alone in his opinion about “late pears.” Nor is it the quick-witted rather precocious youngster who runs off with the prizes at school and college that makes the successful man of later years, whose judgment is trusted by all who know him. Dr. Allbutt’s address is one which is at once original and to the point.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held, September 19, 1883, Dr. William M. Welch, President of the Society, in the chair.

STRANGULATED FEMORAL HERNIA IN A MAN.

Dr. William R. D. Blackwood read the report of an interesting case of strangulated femoral hernia in an aged patient, successfully operated upon.

Mr. B., aged 73, tall, thin, but bearing his years well, and with a previous history of good health, was taken ill with supposed cholera morbus on Saturday, August 11, 1883; but from the suppression of alvine dejections shortly after the seizure, and the rapid change of the vomited matter to a manifest stercoraceous fluid by the time his family physician, Dr. John Ivison, saw him, the diagnosis of the family was set aside for one of more grave nature. The gastric dis-

tress was very great, the desire to vomit urgent, and the act occurred at short intervals. Previously to his illness the gentleman had been extremely constipated, and the amount of liquid and semi-solid faecal matter ejected per orem was simply inconceivable, except to those who saw it. At each instance of vomiting a fair-sized wash-basin was half filled, and the total quantity thrown up before relief ensued was, to speak within bounds, fully three gallons, showing the enormous distention of the intestine which may occur in chronic constipation.

The case was believed to be one of obstruction, with possible invagination of the bowel, and efforts were made towards overcoming the difficulty and obtaining an operation in a normal direction, but without success. The question of strangulation by hernia was not at first accepted, because, although there existed an evident swelling at Poupart’s ligament, the size of it was so small as to be taken for an enlarged gland, the patient having had glandular enlargement previously. There was no local pain, no tenderness, no tension, no dragging sensation at the site of the swelling, no tympanites: in short, the usual local signs of strangulated hernia were absent. The little tumor, also, was movable to such an extent as to easily deceive one, even when closely examined. The doctor having asked my opinion as to the condition of the patient, we saw him together, and I coincided with him as to the difficulty in stating positively to the family the evidence of hernial strangulation; but, as the patient was rapidly sinking from exhaustion, we decided to make an exploratory incision and determine the nature of the enlargement, the justice of this being explained.

The patient was etherized, and, after cutting down to the sac, the mass was found to be an entero-epiplocele. The sac contained very little serum, and, considering the fact that strangulation had doubtless existed for at least thirty-six hours, the bowel, though highly congested, was in good condition. The gut was tightly nipped at the crural ring, and was nearly empty, which accounted for the small size of the tumor. The hernia was internal to the femoral vessels, but closely adherent to them. It was reduced with some difficulty, and pushed far up to clear the deep thrust of the needle in closing the wound. The stitches, four in number, were deeply taken, and the ring obliterated as nearly as possible. A compress of lint, wet with a mixture of Canada turpentine, oil of sweet almonds, carbolic acid, and glycerin (an excellent dressing), was applied under a spica bandage of the groin, and the patient made comfortable in bed. He reacted well from the operation, vomited freely once thereafter, and in an hour and a half passed an alvine dejection without pain or difficulty. The appetite returned moder-

ately at once, food was well retained, and his strength returned nicely. For forty-eight hours the wound did well, healing for one-half its length by first intention, but then inflammatory action set in and free suppuration ensued. In a week, however, the wound had closed, and the old gentleman was able to walk his room with comfort.

The diagnosis of femoral hernia is at times not easy, being, as here, liable to be confounded with enlarged glands or localized varix of the saphena. There was no impulse on coughing, no effort at reduction affected it, and, excepting only the very small tumor, all the local signs of strangulated gut were absent. The advanced age of the patient was against him, and his depressed vital power was a bad factor. The result shows the value of exploratory operation under the circumstances, and I believe that the attendant is unfaithful to his patient if he does not insist upon it in every suspicious case. The wound is of little account: it does not enhance the danger, which is already imminent, and it may, as here, save a valuable life.

Dr. Blackwood also exhibited a recent specimen of atrophying scirrhus of the mammary gland.

Dr. Charles M. Seltzer presented a specimen of aneurism of the posterior part of the ascending thoracic aorta, taken from a convict, 35 years of age, which had escaped detection on careful examination during life.

Dr. Benjamin Lee exhibited some curious mucous casts, resembling tape-worm, which had been discharged by a young lady who had been subject to hemorrhoids and hemorrhages from the bowels.

A CONVERSATIONAL meeting of the Society was held at the hall of the College of Physicians, Philadelphia, September 26, 1883, the President, Dr. Wm. M. Welch, in the chair. Dr. Henry Leffmann read a paper entitled "The Duty of the Hour."

DISCUSSION ON THE RELATION OF THE MEDICAL PROFESSION TO THE GENERAL USE OF ALCOHOLIC LIQUORS.

The President stated that the points presented for discussion were:

1. That the use of alcohol in any form and in any amount by persons in ordinary health is deleterious.
2. That the medical profession, by its lax attitude on this question, is responsible for much of the prevailing abuse of alcoholic liquors.
3. That if alcohol is to be used at all, it should be given as such, and the prescription should be made non-renewable, as with other powerful medicines.

Dr. J. T. Eskridge, in opening the discussion, said that Dr. Percy's experiments showed

that the free use of alcohol tends to prevent the solidifiability of fibrin, and thus renders wounds difficult to heal; and those of Vierordt and Prout, that less carbonic acid is given off in the exhalations by the breath under similar conditions. Bouchardat first pointed out that alcohol darkens arterial blood. These results were obtained by experimenting upon subjects whose stomachs had been overcharged with alcohol, or into whose veins the spirit had been directly injected. They show the poisonous effects of alcohol, and, reasoning from these, it by no means follows that the administration of small quantities well diluted is injurious to health. But observations are not wanting to prove the evil effects of alcohol on healthy persons when taken in small quantities for a considerable length of time. Prof. W. B. Carpenter, a strong advocate of temperance, in his admirable prize essay on the "Use of Alcoholic Liquors in Health and Disease," after describing the baneful effects of alcohol on mind and body, frankly admits that its temporary administration to persons in health, on certain extraordinary occasions, is attended with decided benefit. Prof. Miller, of Glasgow ("Alcohol: Its Place and Power"), arrives at conclusions almost identical with those reached by Prof. Carpenter.

I am satisfied that persons in health, under ordinary circumstances, do not need an alcoholic stimulus, and that, if its administration is attended by no good results, evil only follows the use of alcohol at such times; but, on the other hand, I am convinced that circumstances do arise when, if alcohol is properly administered to persons in health, its good effects far outweigh its evil, and that there are conditions, short of what we are accustomed to call disease, which are improved by the temporary and judicious employment of alcohol.

Bodily and mental labor that cannot be endured without resorting to artificial stimulants had better be left off; but times come in the history of many persons when they are not their own taskmasters. A great deal may depend upon a few hours' work. Tea and coffee may not be sufficient stimuli; and a little alcohol taken at these times will allow an extra strain being made upon the system. The use of alcohol must not be often repeated for the purpose of increasing the power of endurance. It must be remembered that a stimulus in these cases acts the part of the spur to the tired horse. It probably does not directly add force to the individual, but it enables him to call more upon his latent powers, and, of course, the exhaustion which follows is all the more profound by reason of the extra strain upon the vital forces, made possible by the use of alcohol.

Again, the appetites of some persons have been rendered capricious and those of others lessened, and the power of digestion weakened, by worry and over-mental exertion, so that

the simplest articles of food cannot be digested properly. To such the administration of a little wine, with a bitter tonic, before meals, for a week or two, and subsequently a bitter tonic given before meals, and wine during or immediately after the ingestion of food, is followed by admirable results. In all these cases the use of alcohol must be cautious and temporary, and not allowed to be continued longer than is absolutely necessary. I agree with the statement made by the reader of the paper to-night, that below sixty years of age a person is generally not benefited by the use of alcohol in health. I know, indeed, of a case in which it did not become necessary to resort to it before the ninetieth year.

In regard to the use of alcohol in phthisis, to which a casual reference has been made, I have very strong convictions of its value when properly employed. In this disease, when pulse is rapid and temperature considerably elevated, alcohol is contra-indicated; but in the more chronic cases, when respiration is difficult, and pulse and temperature nearly normal, its beneficial effects in prolonging life are evident to every one who has given it a fair trial. Prof. Flint speaks in the highest terms of alcohol in phthisis.

As a preventive of phthisis, alcoholic stimuli have their place and power. It is well known that, in the same family, several children, whose parents have suffered from phthisis, may die from this disease at about the same age. For these persons, if alcohol is occasionally employed judiciously whenever vital force falls below its normal in them, I have no doubt that in many instances the fatal disease might be prevented.

To the second proposition I may say that I do not know of any case in which the use of alcohol in disease, under direction of a physician, gave rise to drunkenness. Some time ago, Dr. Hamilton, in a discussion before this Society, mentioned a case in which a patient became a drunkard in consequence of the use of alcohol in typhoid fever, but it appeared on further inquiry that the man was an habitual drinker before the disease occurred. Lax prescribing, however, may easily become a serious error. It is important that, if alcohol is ordered, the quantity, form, and time of taking should be indicated. It should be taken only at meals. This periodic and formal use of it will make the patient willing to stop when required. I admit that if we consider that alcohol is injurious in health we must regard its use in social gatherings, and especially in those composed of medical men, as wrong.

In reference to the last point I cannot speak from experience. If the adulteration is as extensive as pointed out in the paper, then the author's view, that alcohol should be used as mentioned, is correct, I, however, doubt that we can make, extemporaneously, mixtures which will take the place of natural liquors.

Dr. Mills said: I would not wish to be regarded as an advocate of anything else but temperance in the best use of the word, but the question of the influence of the moderate use of alcohol upon intellectuality and the longevity of intellectual workers is one of considerable interest, from what might be termed a biographical point of view. During the International Medical Congress of 1876, one of the English delegates expressed the opinion, in words which I do not exactly recall, that the intellectual productions of men who did not use alcohol at all were not of a character to indicate the value of abstinence. Many distinguished men who have lived to a comparatively advanced age—the English Lord-Chancellors, German thinkers, and well-known American statesmen, for instance—used alcohol in moderation throughout their lives. I simply introduce this point for discussion. About the evils of the abuse of alcohol no doubt can exist.

Dr. Wood: I consider the first proposition advanced by the author of the paper to be untrue: it is entirely too sweeping. To say alcohol is deleterious in *any* form and in *any* quantity in health is to say that one would be injured by simply smelling a bottle of whiskey. I am fully convinced that we do not need alcohol in health, but indulgence in it moderately, on occasions, is probably no more hurtful than over-eating. I have seen, at social gatherings, total abstainers who, while standing apart from the general company and congratulating themselves upon their superior virtue in not indulging in stimulants, gorged themselves beyond repletion with the food set before them, much to their stomachs' distress.

The moral question involved is the old one of use and abuse: Whether we must forego the use of a thing because some one else abuses it, and are we to abstain from a certain amount of pleasurable indulgence because of the example which that indulgence offers to others? I do not believe in attempting to force total abstinence, because I do not believe that the movement will accomplish the desired result. Not long ago I was travelling in Kansas, and I met a prominent prohibitionist, a member of the Central Committee of the State, whom I questioned about the success of the prohibition movement, asking, *inter alia*, if they had destroyed the grape industry, as the law directed, in the wine-making districts. He replied that they did not expect to do this in those places. Here was an admission of the weakness of the cause; for where the manufacture and use of wine are now most active was the least hope of abolishing it. In the same car was a travelling salesman on the verge of delirium tremens, and I asked him as to the effect of the liquor-laws in Kansas. He replied, "I can get a drink of whiskey anywhere in Kansas for fifteen cents." The Scandinavian method of

dealing with the temperance question seems to me more practicable. In Sweden and Norway the country is divided into districts, in each one of which only one tavern is allowed. The licenses are sold at public auction. The temperance people have combined and bought up the licenses. They are obliged to open the tavern, but they can adopt such regulations as will prevent the excessive use of alcohol by those who frequent the place, and also employ all moral means to persuade men not to drink at all. I do not think that the adulterations of liquor are as harmful as has been stated by the lecturer. Liquors and wines are artificial products always.

I think that good liquors can be easily obtained. I do not agree with the proposition that medical men are responsible for the habit of drinking to excess: on the contrary, the example and teaching of the medical profession have done much to diminish the evils of intemperance.

Dr. O'Hara: In reference to the remarks of the last speaker, let me read the following from Richardson's "Induced Diseases of Modern Life," page 232: "Speaking honestly, I cannot, by any arguments yet presented to me, admit the alcohols by any sign that should distinguish them from other chemical substances of the paralyzing narcotic class."

If this view be correct, we can have no doubt that alcohol is injurious in health, and that it does not serve as food. We are too much under the ideas of Liebig in this matter. For my part, I cannot see that the total-abstinence movement is a failure, or that the views advanced in the paper are erroneous. They are the views which have been advocated by high authority, in the International Medical Congress in 1876, and other scientific bodies, for instance. The medical profession may be responsible indirectly for much of the excessive drinking, through the erroneous idea, now passing away, that it was food.

I have myself learned by experience the evils of too much confidence in alcohol, when I thought it was food, and now watch it closely as a medicine. As to the cases narrated by Dr. Eskridge, they cannot be regarded as cases of healthy persons, and the use of alcohol in the treatment of them is a question of therapeutics, not of hygiene.

Medical men may certainly accomplish a good deal by the teaching influence of example.

I recall an instance in which brandy was used for dyspepsia: the patient, it is true, got rid of the dyspepsia, but he complained frequently until the day of his death, which was superinduced by liquor, that he made a bad swap and would rather have held on to his dyspepsia.

The conclusions of Dr. Hunt's paper were adopted by the International Medical Congress, 1876, and ordered to be transmitted to the National Temperance Society, the

Women's National Christian Temperance Union, and the Friends' Temperance Union of New York. They were:

1. Alcohol is not shown to have a definite food-value by any of the methods of chemical analysis or physiological investigation.

2. Its use as a medicine is chiefly that of a cardiac stimulant, and often admits of substitution.

3. As a medicine, it is not well fitted for self-prescription by the laity, and the medical profession is not accountable for such administration or for the enormous evils arising therefrom.

4. The purity of alcoholic liquors is, in general, not as well assured as that of articles used for medicines should be. The various mixtures when used as medicines should have a definite and known composition, and should not be interchanged promiscuously.

Dr. Tyson: This question is one very difficult to discuss; both parties are apt to go to extremes. Dr. O'Hara's remarks are a case in point, for the injurious effects to which he alludes are the effects of the use of alcohol in excess and not in moderation. It must have been the experience of all practising physicians to see many cases which are benefited by the moderate use of alcohol, especially at meals, while in many aged persons its use is very appropriate, and even necessary. I am not prepared to deny altogether the correctness of the second proposition offered in the paper. I think there may be some ground for it, yet I do not know a single case in which the recommendation of the use of alcohol in disease has resulted in establishing a habit of drinking. I recall a case in which a gentleman was advised by a non-medical friend to use whiskey for dyspepsia. It was tried, and, finding good results from it, he continued using it in small amounts daily: the use was kept up until one day the patient found the bottle empty. He missed his usual dose so greatly that he was forced to realize that he had been drinking, and never used the liquor again. It may be laid down as a rule that it is not safe for physicians to advise the regular use of alcohol for dyspepsia: it may lead to a habitual use of stimulants. As to the third point, I think that, in view of the fact that it is still possible to get pure wines, especially if we are satisfied with domestic wines, the flavor and other properties which made them more acceptable to the patient justify their continued use; but I for one am willing to try the effect of pure alcohol, properly diluted, in cases where alcohol only is indicated.

Dr. Hamilton: Moderate drinking, it must be remembered, is very often the road to immoderate drinking, and therefore the physician, whose influence in this connection is paramount, should sedulously avoid the too frequent and too liberal use of liquor, especially in young subjects. In the low forms of fever, or in chronic wasting disease, such,

for instance, as pulmonary consumption, to which allusion has been made, it is often of great advantage, and in the latter disease, where expectoration is profuse, but unaccompanied with much fever or difficulty in breathing, it may prolong life for an indefinite period. The custom of drinking in the wealthy and fashionable circles may still be said to prevail with tyrannic power, and in ordinary social reunions the same practice is common. The influence of wealth and fashion is dominant, and, until some amelioration in this connection is manifest, no general temperance reformation need be looked for in the people at large.

The allusion to the adulteration of wines and stronger liquors was deservedly made, but it occurs, doubtless, much more frequently in regard to the finer and more costly than to the cheaper liquors, and the perfection to which this adulteration has attained is simply notorious.

Dr. James C. Wilson: I am much pleased to see this subject before the Society. It is a subject which ought to be agitated, because the agitation will bring out the truth. I think that the propositions rather overstate the case, and somewhat weaken the points advanced. Independently of law, church influence, and local politics, a wide-spread popular sentiment is developing in favor of temperance, but not of total abstinence. A feeling against excessive indulgence is growing steadily in the community. It is now considered "bad form" to drink to excess at social gatherings, and young men especially are much more restricted than formerly. The three-bottle men of earlier days are now unknown. It is, however, going to an extreme to put the proposition that the use of alcohol in any form, and to any extent, is deleterious. Many persons can use alcohol in moderation, and derive comfort from it, without injury. I do not agree with the second proposition. Respectable medical men are not lax in their attitude on this question, but are accustomed to caution their patients in regard to the dangers of the use of alcohol. Most of them direct the amount to be taken, and fix a time for discontinuing the use, just as they do with other powerful drugs. As regards the suggestion to use alcohol alone, it appears to be open to some objections. It is not possible to imitate the different wines. No formula of the Pharmacopœia or prescription could reproduce the perfect mixture in natural wines, which are often so specifically beneficial.

Dr. Frank Woodbury said: I have been much interested while listening to the paper, and, in the main, sympathize with its teachings. I think that the propositions submitted for consideration were purposely exaggerated so as to excite discussion, since they are not logical deductions from the paper, and, indeed, have not been presented as such. The alcohol question is a complex one: it is a

great social and moral problem, as well as a scientific and medical one. The subject as presented this evening has at least three aspects: the use of alcohol in any quantity in health—this is a physiological question; its employment by physicians—which is a medical question; and the right of physicians to prescribe it—a moral question. This moral question is really the principal one of the paper, as is shown by its title, "The Duty of the Hour." With regard to the question as to its injurious effect when used in health in any quantity, I would ask, first, what is meant by a state of health? If a physiological definition is accepted, then no person living under the artificial conditions of civilization can be in a state of perfect health. Ordinary health is merely an approximation towards physiological health; and if the utility of alcohol is acknowledged in the condition of disease (which is merely any departure from the healthy standard), then the first proposition is answered by the lecturer himself, in the negative. Then again, concerning the use of alcohol "in any quantity," I think it worth while to recall the fact that not only is it without injurious effect in very small doses, but that in reality the organism cannot escape from imbibing alcohol; it is omnipresent—it is in fresh bread and in ripe fruits, and even traces have been found in the air we breathe, provided there exist a certain amount of organic matter and the conditions of temperature and moisture necessary to fermentation. Even in the muscular tissue and urine of total abstainers a substance is present chemically indistinguishable from alcohol.

In large doses every one admits that it is capable of destroying life by its own properties when taken into the system, and it is therefore a poison. Its use in much smaller doses, it must be admitted, may not prove incompatible with the enjoyment of long life and ordinary health; but in many cases its constant use directly induces disease and tends to shorten life. The fact that a substance is a poison, however, is not sufficient in itself to forbid its use in disease, provided that it be given in accordance with the teachings of science and experience. The physician with the longest experience of any present has just expressed his deliberate opinion that it is useful in low conditions of vitality and in slow convalescence.

With regard to the right of the physician to prescribe alcoholic liquors, the moral aspect of the subject, I hesitate to express an opinion, for fear of being misunderstood. I would suggest, at the outset, that in reality the treatment is not so entirely under the control of the physician as is implied by the question. Is it not the fact that it is the patient who employs the medical attendant, and if he is not treated in accordance with his ideas of propriety he becomes dissatisfied, loses confidence in his physician, and engages another?

A rough illustration may be given : When a Chinaman falls sick, he, as a rule, will, if possible, secure the services of the kind of physician that his parents and friends approve of. A sick Indian in the same way prefers the treatment of his medicine-man to that of the most scientific post physician. Is it not also true that in more cultivated communities the physician who is called upon in the hour of sickness is the one whose thoughts and prejudices best agree with those of his clients? Patients certainly should not be allowed to dictate in the details of treatment, but their unrelinquished right to approve or reject the general plan of treatment cannot be disputed. It may seem like a humiliating admission, but it is true that in a community where the taverns far exceed the bakeries, total-abstinence physicians will have more opponents than clients.

I hope that nothing that I have said will convey the impression that I approve of the use of alcoholic liquors in disease, given merely with a view to gratify the patient: if ordered at all, they should be given to obtain the therapeutical action of ethylic alcohol, which, on account of variation and strength and adulteration in ordinary liquors, may be best given in the form of dilute alcohol in order to secure both purity and exact dosage. This, I have learned, has been largely employed in Bellevue Hospital, where it was introduced by Dr. Gillette; by its use the medical effects of the drug are obtained, and the danger of encouraging the use of ordinary liquors is to a large extent obviated. In conclusion, I wish to express the opinion that the second proposition should be reversed, and it should read, "Physicians, deserve great credit for inculcating more correct and scientific ideas with regard to the use of alcoholic liquors by the community." The great advance in the cause of temperance, in my opinion, is very largely due to the teachings of certain prominent physicians and the precepts and example of the great body of the profession.

Dr. Leffmann, in closing the discussion, said: I am dissatisfied with the direction the debate has taken, for too much time has been given to the discussion of the value of alcohol as a remedy, a point which I expressly excluded. While the propositions which I laid down are my convictions, and I believe they will all be ultimately recognized as true, yet I purposely worded them in an extreme form to make the debate more definite. No one, however, is justified in giving to the first proposition the strained meaning that Dr. Wood put upon it, namely, that smelling a bottle of whiskey would be held as injurious. The language should be judged according to its intention. The remark quoted by Dr. Mills, in regard to the literary abilities of total abstainers, is also unworthy of the dignity of the question, and is not argument.

Dr. Woodbury's suggestion that alcohol must be used because patients expect its use is surely not the true principle of medical practice. Patients are not to be the judge of anything in treatment. The success of homœopathy and kindred delusions is largely due to the erroneous and absurd view that patients may elect the system of medicine on which they are to be treated. Neither can one regard the fact of the occasional existence of alcohol or alcohol-like bodies in organic matter, in urine or in muscular tissue, or in fresh bread (which latter I doubt very much), as any argument for its use in health as a beverage. Several of the speakers have apparently regarded the paper as declaring the adulteration of liquors to be harmful; but this was not the ground taken. On the contrary, in two papers on alcohol previously read before this Society, and in papers read elsewhere, I have pointed out that the adulterations are cheats rather than poisons. It is the uncertainty and deception to which I call attention.

Although objection has been made to the third proposition on the ground that alcohol alone or simply diluted will not answer, yet we have these objections well refuted by the fact just stated by Dr. Woodbury, that in one of the New York hospitals such a preparation is regularly and successfully used.

The second proposition has been misunderstood. It has been taken to mean that the use of alcohol in disease under medical advice has resulted in drunkenness; but this is not the meaning. It is the habit of moderate drinking in health that makes drunkards, and it is to the indifference of the medical profession to this habit that the second proposition relates.

The whole question, it seems to me, is a most important one. The terrible effects of alcohol are seen in all directions, and if the restriction of it is needed—and I do not see how any one can doubt that fact—such restriction must only come by active assistance of those who know the facts best. It will never do to temporize with vice. No method will answer with any form of crime or vice except continuous, unrelenting opposition. It is a mistake to suppose that wide-spread and deep-rooted habits are unconquerable. Did time permit, it could be shown that traits of human character, as vicious and deep-rooted as the tendency to drinking, have been eradicated by persistent effort; and what has thus been done can be done again. I am fully of the opinion that the tavern finds its best support in the idea so general in the community that physicians consider the regular use of a little alcohol not injurious. When the medical profession is true to itself, and teaches that alcohol should never be used except for a specific purpose and under continued medical advice, the tavern will lose its best hold on the community.

The statement of Dr. Wood that he is fully convinced that we do not need alcohol in health, and that indulgence in it moderately on occasion is no more hurtful than over-eating, certainly leans in favor of my first proposition.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, October 4, 1883.

The PRESIDENT, R. A. CLEEMANN, M.D., in the chair.

PORRO-MÜLLER OPERATION.

DR. W. H. PARISH reported a Porro-Müller operation performed by him upon a dwarf at the Philadelphia Hospital, June 30, 1883, the patient surviving only forty-eight hours. He presented these specimens from the case, including the uterus, the abdominal incision (which had united) and surrounding wall, the stump of the cervix in position at the lower angle of the wound, the entire external genitals and mons, including the vagina and bladder. The ureters were found entirely free. The child had arrived at about two weeks more than the eighth month of utero-gestation. It was small, and lived for three weeks. He gave the clinical history of the patient, from which the following report of the operation is taken:

After etherization the bladder was emptied with the catheter. An incision was then made in the median line of the abdomen, seven inches in length, extending from two inches above the symphysis pubis to about one inch above the umbilicus, passing to the left of the umbilicus. The slight bleeding from the lips of the abdominal incision was controlled by artery-compressors before opening the peritoneal cavity. The absence of intestine from in front of the uterus was ascertained by percussion before making the incision. The uterus was easily raised from the abdominal cavity.

Owing to the anterior lumbar curvature, and to the length of the incision, it was impossible completely to prevent the escape of intestines. After the uterus had been turned out, a protector made of two layers of flannel, with an intervening layer of protective silk, was placed over the abdomen,—the object being to avoid chilling, and to prevent the escape of blood and other fluids into the peritoneal cavity. This protector, when used, was wrung from a warm carbolized solution. The next step was to place around the cervix the wire of an *écraseur*, and to constrict the tissues in its grasp to such an extent as to stop all circulation of blood through the uterus without cutting through the peritoneum. This step required speed, care, and judgment. The liability of a loop of intes-

tine or of omentum to be caught by the constricting wire had to be carefully guarded against. Immediately that sufficient constriction had been secured, a short incision was made with a pointed bistoury through the antero-uterine wall down to the placenta, for the placenta proved to be attached anteriorly. The incision was then rapidly extended, from near the neck to the fundus, with a probe-pointed bistoury, guided by two fingers of the left hand introduced into the incision. The blood pent up in the uterus by the constricting wire escaped freely, but did not enter the abdominal cavity. The incision passed to the external surface of, but not through, the placenta. The hand was immediately introduced into the uterus through the exposed membranes at the fundus, and the child quickly turned out, the placenta being in this manœuvre detached in main from the uterus. The cord was promptly tied and cut, and the child handed to Dr. Keating. It was asphyxiated when delivered, and presented a very unpromising appearance.

It, however, quickly breathed and cried under the efforts of Dr. Keating at resuscitation. The rapid resuscitation was effected by alternately dipping the child in basins of hot and of cold water. After removing the infant, the uterus, with both ovaries and both tubes, was amputated a half-inch above the constricting wire: this point was about at the internal os. It was then seen that the wire had completely controlled the circulation, and not a drop of blood escaped from the stump of the uterus.

The next step consisted in passing obliquely through the stump two steel pins five inches in length, one above, the other below, the wire. After this a strong carbolized silken cord was passed around the stump, in the line of the wire, and partly tightened. The wire was then cut and removed, and the silk cord then very firmly tightened and securely tied. Special care was given to the tightening of this cord and to the tying of a secure knot. The ends of the pins rested laterally on the abdominal walls, and under the ends, on each side, was placed a piece of sheet-lead. The stump was thus secured outside of the abdominal cavity, and rested at the lower angle of the wound. New carbolized sponges on handles were introduced into the peritoneal cavity, down into Douglas's pouch, but the entire cavity was free from blood or other fluid.

The abdominal wound was then closed by deep and superficial silver sutures. The deep ones were introduced so as to include the peritoneum. During the introduction of the deep sutures, flat carbolized sponges were introduced beneath the incision, so as to catch what oozing might occur from the needle-punctures. The external portion of the uterine stump was brushed over with carbolic acid, and then invested with lint saturated

with carbolyzed oil. A strip, two inches wide, of dry carbolyzed lint was placed on the incision; over this a few strips of rubber adhesive plaster were applied transversely, over these a thick layer of carbolyzed cotton, and over all a flannel binder. The patient was put to bed, and surrounded with pans of hot water. Dr. Montgomery took charge of the patient's general condition during the operation, and administered during its performance four hypodermic syringefuls of whiskey. He reports that the time taken up in the operation, from the beginning of the abdominal incision until its complete closure, occupied forty minutes. During the operation the pulse ranged from 100 to 128, the greater frequency being during the making of the incision in the abdominal wall, and was probably due to impeded respiration. The constriction of the cervix had no appreciable effect upon the pulse. Soon after being put to bed, the pulse was 132, but in two hours was 108 per minute, and of good volume. The respirations during the anæsthesia became disturbed and imperfect, producing considerable cyanosis, and probably causing increased frequency of the heart's action.

The patient rallied well, as was shown by return to consciousness, by bodily warmth, and a fair pulse. For about sixteen hours her condition seemed very favorable, excepting that the kidneys had ceased to act. At the end of twenty-three hours there was marked change for the worse; the mind wandering, pulse 140, temperature 100° F. An inspection of the dressing at that time showed some oozing from the stump,—perhaps six ounces,—but it had then stopped. An additional ligature was placed around the stump, and one of the uterine arteries was separately ligated, the other could not be found; the stump was also brushed over with Monsel's solution. There was no subsequent oozing. That there should have been any loss of blood in this manner was a surprise to me, as the original ligature was so very firmly tightened and secured, and had for a number of hours after reaction so perfectly controlled all bleeding. There was marked atheroma of the vessels of the stump, as was revealed post mortem. After the twenty-third hour the patient grew progressively worse, became uncontrollable and delirious, had convulsive manifestations, and died in coma. There was no vomiting until twenty-six hours after the operation, and it recurred only once. She experienced but slight pain, and sulphate of morphia was given in small quantity,— $\frac{1}{4}$ gr. hypodermically, soon after the operation; again $\frac{1}{4}$ gr. at the end of eleven hours,—and subsequently, about the thirty-sixth hour, because of the great jactitation and the difficulty of keeping the patient in bed. The morphine was given hypodermically in such small amount that the coma could not have been due to it. Eight hours after being put to bed

the urine was drawn with the catheter. Subsequently it was introduced at different intervals, but on each occasion the bladder was empty, and it was also found empty at the post-mortem examination. Only three ounces of urine were secreted after the operation. The patient survived forty-two hours.

Dr. R. P. HARRIS remarked that this was the only Porro operation that had been complicated by diseased kidneys. The case was an unfavorable one in consequence of this complication. The albuminous character of the urine was supposed to be due to mechanical interference by the enlarged womb, but unfortunately this was not so. The bad habits of the patient had led to a general disease of the arteries as well as of the kidneys. The former were atheromatous. The Porro-Müller operation has been performed thirty-four times; the unmodified Porro, eighty-two times,—total one hundred and sixteen cases, of which forty-eight per cent. have been successful in saving the lives of the mothers. When the pedicle or stump is dropped, it ceases to be a Porro operation. Of thirteen cases in which the stump has been dropped, eleven have been fatal. Dr. Godson is writing a full history of this operation, including the many experiments which have been made on animals to determine the best method for each step of the operation and the causes of death. Dr. Porro has saved four out of five cases in his own hospitals. In the Milan Hospital nine were saved out of twelve. In Germany the success has been poor, but in Austria better.

Dr. O'HARA asked why the Porro operation should be modified, when it had been so successful in the hands of the originator.

Dr. HARRIS: Dr. Muller was called upon to operate in a case in which the fœtus had been dead for some time and was putrid, the uterus being distended with gas. To prevent any septic matter finding its way into the abdominal cavity, he enlarged the abdominal incision, lifted the uterus out of the abdomen, and used cloths around it and over the wound before incising the uterus. This patient recovered. The mortality this year has been very slight.

Dr. E. E. MONTGOMERY had been associated with Dr. Parish in this case, as one of the hospital staff, and at first thought the case should be allowed to go on to full term before operating, and that Cæsarean section or laparo-elytotomy, as practised by Dr. T. G. Thomas, should be the selected form of operation, but Cæsarean section has been very fatal in large hospitals, doubtless because it is generally a last resort after the patient has been long hours in labor, and for that reason is dangerous. But if a large drainage-tube were passed through, entering at the abdominal incision and out of the vagina, and a constant flow of antiseptics kept up, a good condition might be secured.

During the operation a few modifications suggested themselves. One of these was to divide the cervix uteri by a V-shaped incision, the peritoneal surfaces being united over the wound, a flat Peaslee drainage-tube being introduced and the stump dropped. Dr. Harris tells me that Schroeder has tried this, and that it has been done twice by —, once successfully.

He thought the wire of the *écraseur* passed around the cervix before removing the child a source of danger to the latter, as well as being likely to embrace a loop of intestine.

Dr. HARRIS, in criticising the plan of dropping the stump, called attention to the fact that the portion of uterus embraced in the ligature is not a pedicle. It is a stump, and will continue to contract, and oozing of blood or even profuse hemorrhage is liable to occur. It has been found impossible to prevent this by any form of ligature that has been tried. If the stump is dropped, this hemorrhage or oozing will take place into the abdomen, and will be a certain cause of death. Dr. Isaac E. Taylor came near success, but his patient died from thrombosis on the twenty-sixth day, during an attack of phlegmasia alba dolens. It would be very desirable to avoid the dragging on the abdominal wound.

Dr. MONTGOMERY gave a short *résumé* of the cases treated by dropped stump, and the causes of death in them.

Dr. PARISH remarked that the disease of the kidneys was undoubtedly the cause of death, the implanting of the acute condition caused by pregnancy upon the previous chronic disease. He also spoke of the possible deleterious effect of the ether upon the system laboring under such a condition of the kidneys. It made the administration of ether in such cases a very serious matter.

Dr. PARISH also exhibited specimens from a case of

EXTRA-UTERINE PREGNANCY,

and made some remarks upon the history of the case. He had attended the patient in her first labor, seven years ago. She was a brunette, of very restless and active habits and disposition, and was quite uncontrollable. She was up and about her house a few days after her labor, and the result was subinvolution, which persisted until her death. During the interval she had passed out of his care, and had been subjected to local treatment, including the use of sponge tents. These had developed pelvic inflammation, and later she was troubled with frequent micturition and dysmenorrhœa. She afterwards came under his care again for treatment of these troubles, and on one occasion he had applied leeches to the cervix, and gave her positive orders not to leave her bed; but festivities were going on, and she went down and assisted in making ice-cream and cake, and later in eating them. This indiscretion was followed by a second

metritis. He afterwards treated for the dysmenorrhœa by numerous minute punctures of the cervix, and the application of tincture of iodine, and the introduction of a sponge tent. The next period was not so painful, and the second was missed. He told her she was probably pregnant, but two weeks later a slight show occurred, and, fearing an abortion, he advised rest in bed: she refused an examination and would not be quiet. The flow continued, but did not increase, but there was pain in the pelvis in addition. Eleven days after the flow commenced, a sudden attack of intense pain occurred; the patient was completely prostrated, and was carried up-stairs. As he was not at home, Dr. O'Hara was called in, and used morphia hypodermatically. He found, on examination, a mass in the posterior part of the pelvis; the uterus was pushed forward against the pubes. He diagnosticated rupture of a Fallopian pregnancy cyst and internal hemorrhage, and gave opiates to relieve the intense pain. The pallor and exhaustion became more pronounced, and death occurred thirty hours after the first symptom. Other physicians who saw the patient did not agree with Dr. Parish in his diagnosis. The autopsy revealed no recent peritonitis. There was blood in the pelvic and abdominal cavities: this had escaped from a ruptured cyst of the Fallopian tube. The foetus exhibited was found in the pelvic cavity. The position of the cyst was such that it would have been an easy operation to open the abdomen and ligate and remove the cyst and ovary and cleanse the pelvic cavity. The Fallopian tube involved is dilated, except at the uterine extremity. The other tube is occluded at the fimbriated extremity. Inflammatory bands derange the relations of the different pelvic organs. We have here the history of inflammatory processes changing the epithelial linings and relations of the Fallopian tubes to the uterus and ovaries as predisposing causes of extra-uterine pregnancy.

Dr. HARRIS remarked that the hemorrhage after conception, the peculiar location of the pain, and the pallor make the diagnosis an easy one. He had one patient that recovered spontaneously. The operation suggested by Dr. Parish has been performed once successfully. Dr. T. G. Thomas made the diagnosis and wished to operate, but the husband, a physician, differed in opinion, and would not consent. That patient lived sixty hours. Dr. Playfair advises the operation.

Dr. O'HARA saw the case early, and could not make such a diagnosis. He saw no sign of internal hemorrhage then. He thought of peritonitis or cellulitis. There had been no history of a cast of the uterus. He did not see how a positive diagnosis of extra-uterine pregnancy could have been made at that time. The patient was certainly going to die, and he would approve of an exploratory operation.

Dr. PARISH remarked that Dr. O'Hara was perhaps right: he (Dr. P.) was the only physician present who looked at the case in that light; all the others disagreed and had their reasons. If this diagnosis of a probable extra-uterine foetation had been made early, before the accident, then when the acute symptoms supervened a quick diagnosis could have been made as to the cause of the pain. He described a fold of peritoneum found behind the uterus, and, as the clot had the appearance of different ages, portions being yellow, he suggested that an extra-peritoneal hemorrhage had first occurred under this fold, perhaps ten days before the intra-peritoneal hemorrhage which was the cause of death.

Dr. BEATES exhibited for Dr. Boardman Reed, of Atlantic City, New Jersey, a tumor of the uterus, which the latter supposed to be an early stage of carcinoma; but no microscopic examination of the specimen has been made.

Dr. BEATES reported the case of an infant which appeared well and hearty at birth but died in collapse on the third day. An autopsy revealed acute gangrene of the mucous surface of eight feet of the ileum; hemorrhage had occurred into the intestine and was the immediate cause of death.

W. H. H. GITHENS,
Secretary.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held, October 24, 1883, George F. Shrady, M.D., President, in the chair.

SARCOMA OF THE CHOROID AND VITREOUS BODY.

Dr. CHARLES HEITZMAN presented a specimen of sarcomatous degeneration of the choroid and of the vitreous body, occurring in a man about sixty years of age, upon whom enucleation had been performed, but, other organs becoming affected, the patient succumbed. Dr. Heitzman took occasion to emphasize the view which he had for some time held, that the vitreous body is alive; and he thought this specimen was an evidence of that fact, inasmuch as a distinct fibrous capsule separated this body from the choroid growth. Through this capsule cells could not have penetrated, and none were seen in that portion of the field under the microscope.

NEPHRECTOMY BY ABDOMINAL INCISION FOR FLOATING KIDNEY.

Dr. GILL WYLIE presented a kidney removed from a patient whom he saw in the country in August last. She had been treated for uterine and ovarian disease, but these organs were not found to be affected. The patient had for some time suffered extreme pain in the right side, calling for chloroform in addition to opium as an anodyne. At the age of fourteen she had had pneumonia, but

there were at present no signs of pulmonary disease, nor was there a family history of this affection. She was thirty-four years old, the mother of four children. In the dorsal position nothing abnormal was discovered, but when the patient assumed the upright posture she complained of pain, and remarked that she thought the doctor would then be able to feel a tumor in the abdominal wall. A floating kidney was then recognized, and was supposed to have caused pain by becoming strangulated. It was extirpated through an abdominal incision to the right of the umbilicus, the peritoneum being opened a distance of three inches. The vessels were ligatured with silk and the abdominal wound closed. The patient did well. The temperature rose but slightly. Twenty-four ounces of urine were secreted daily, at first, and at present about thirty-six. The stitches were removed on the eighth day. The patient suddenly sprang from the bed, in a dream, and caused partial separation along the line of union, and some hemorrhage took place; but, aside from this accident and a small abscess in the abdominal wall, she was doing fairly well. Pain disappeared from the right side. There was now slight pain in the region of the left kidney, but of rather an indefinite kind. The urine had formerly contained albumen and pus, and it at present contained some pus, pointing to possible affection of the left kidney, but possibly to some degree of suppuration in the ligatured ureter. The left kidney was in its normal position. Dr. Welch examined the organ removed, and found it the seat of tubercles and the bacilli tuberculosis.

Dr. JOSEPH HOWE thought the symptoms might have been due alone to the presence of the tubercles without strangulation.

Dr. A. JACOBI would not have the impression go forth that the presence of a floating kidney always justified nephrectomy; on the contrary, extirpation is seldom called for, whereas movable and floating kidneys were very common. He himself had seen as many as thirty, mostly in women, some in children, not so many in men, and in not a single case had an operation been demanded. The patient had better wear a bandage and put up with slight discomfort than to go with but one kidney.

Dr. WYLIE coincided with the remarks made by Dr. Jacobi, except that he did not believe that much was to be gained by a bandage. It was not improbable that a bandage higher up, in the form of a corset, had something to do with causing the condition.

Dr. HEINEMAN saw as many as half a dozen cases of floating kidney, principally in women, at Dr. Clark's clinic every season. When tuberculosis affects one kidney it is likely also to affect the other; and it was not improbable that the remaining organ was the seat of disease in this case.

STRANGULATED OBLIQUE INGUINAL HERNIA.

Dr. JOSEPH HOWE presented the specimen, the chief interest of which was the fact that the patient had suffered with the strangulation for five days before seeking for medical relief, supposing the difficulty to have been due to constipation. He was 45 years of age, and said the hernial tumor had been there for thirty years, and had never before given him any trouble. About three or four inches of gangrenous gut were removed, and the ends stitched to the sac. The patient had been vomiting, suffering extremely, and was in a state of partial collapse. It was not probable that he could recover. About two years ago Dr. Howe presented a similar specimen to the Society, the man having gone without aid for five or more days. He died soon after the operation.

Dr. WYLIE had seen a patient in the country in whom an artificial anus had formed at the seat of a strangulated hernia, his physician refusing to operate on the day he saw the patient, because, as he said, it was too cold. The patient was still confined most of the time to his bed, more than a year since the accident.

Dr. HOWE replied to a question by Dr. WYLIE, that he would not attempt to close the fistula, and if it were not large enough it should be increased in size.

CONTRACTION OF THE SEMILUNAR VALVES,
CAUSING PULMONARY STENOSIS.

Dr. R. VAN SANTVOORD presented the heart removed from a child which died on the twentieth day. It was well nourished, the pulse and respiration rapid, a loud murmur at the junction of the sternum and third and fourth costal cartilages, transmitted all over the chest. Cyanosis developed, and the child died, apparently of heart-failure. The valves at the pulmonary artery were much thickened and shortened, causing stenosis. There was marked hypertrophy of the right ventricle; there was no atelectasis.

TWO CASES OF RUPTURE OF THE HEART.

Dr. FERGUSON presented the specimens, the first one of which was removed from a man who had had an attack of dyspnoea and about two hours afterwards was found dead in the water-closet. The body was well nourished; the kidneys were atrophied, giving well-marked signs of diffuse nephritis; the lungs were congested; the pericardium contained a large amount of blood; the heart-walls were pigmented and showed signs of general myocarditis. Near the apex in the left ventricle was a rupture three-quarters of an inch in length.

The other specimen belonged to a man who had received an injury on the back of the hand, tearing away the soft structures and exposing the extensor tendons. The wound was dressed antiseptically, and the patient did

well the first three weeks, but the muscles of the face and neck and thorax then became contracted, breathing was interfered with, and the patient died in one of the tetanic convulsions. At the autopsy the brain and cord were found congested, the lungs oedematous and congested; the pericardium contained a large amount of blood; the heart was normal, except that in the right ventricle there was a small rupture, admitting a probe. In the one case, therefore, the rupture was due to disease of the cardiac muscle complicated by diffuse nephritis; in the other, to the convulsions of tetanus.

VERTEBRAL ABSCESS—DEATH WITH CYANOSIS.

Dr. H. D. CHAPIN presented a specimen removed from the body of a child nearly three years of age, which died of symptoms of cyanosis. A few weeks previously it had been brought to the Dispensary with cough and a wheezing sound over the chest, but on physical examination no symptoms were found except bronchial and tracheal râles. There was no cyanosis at that time, and no dysphagia. The child had improved under treatment, but the mother said that while playing it suddenly became blue and died. At the autopsy a large abscess was found, affecting the first and second dorsal vertebrae; there was a tumor composed of a bronchial gland which had undergone cheesy degeneration; there were also tubercles in the lungs and trachea.

CARCINOMA OF THE STOMACH, LIVER, SPLEEN,
AND INTESTINE.

The specimen was presented by Dr. Carpenter for Dr. STICKLER. The patient was a man, 52 years of age, who first began to suffer from pain in the region of the stomach; the pain soon extended into the right hypochondrium. Anodynes and counter-irritants constituted the treatment. The patient rapidly emaciated; vomiting occurred, but not of blood or dark-colored matter; the cancerous cachexia developed. There was constipation and scantiness of urine. Later an irregular tumor was felt in the region of the pyloric end of the stomach. The patient died at the end of fifteen months after the commencement of his symptoms, and at the autopsy the liver, the intestines, the spleen, and the stomach were the seat of cancerous degeneration, the latter organ and the liver being greatly diminished in size. The cæcum was much constricted, which would account for the extreme constipation which had existed.

SCARLET FEVER IN HORSES.

Dr. PETERS reported further on this subject, stating that since the last meeting he had conversed with several of the veterinary surgeons in the city, and most of them recognized the symptoms which he had before described

under the head of scarlet fever, but all were not agreed as to the nature of the disease; one surgeon had called the affection measles, having been more familiar with that disease than with scarlet fever in the human race. Dr. Peters thought it probable that certain symptoms classed as a peculiar disease, and followed by what was acknowledged to be scarlet fever, were only an early stage of this affection. Scarlet fever was more apt to be found in the sale-stables, where many horses were being constantly brought in from the country, than in the car-stables, where only from three to ten were brought in at a time.

REVIEWS AND BOOK NOTICES.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Vol. IV., E to FIZES. Washington, Government Printing-Office, 1883.

The fourth volume of this magnificent work has lately appeared, containing 4802 authorities, representing 1926 volumes and 3885 pamphlets; it also includes 12,361 subject-titles of separate books and pamphlets, and 48,977 titles of articles in periodicals. This volume, like the others, is a royal octavo of over a thousand double-column pages, handsomely printed upon heavy tinted paper, in a manner in every way worthy the work itself, which is monumental in character. In looking over its pages, we observe that the bibliography of some special subjects is remarkably full, quite discouragingly so sometimes when one happens to want to write an article upon a topic which deserves careful preparation. We also are attracted by the titles of rare and valuable books, many of which were secured through the personal interest and attention of the librarian, Dr. Billings, who has put the entire profession under obligation for his zeal, industry, and devotion to his work.

A GUIDE TO AMERICAN MEDICAL STUDENTS IN EUROPE. By HENRY HUN, M.D. New York, William Wood & Co., 1883. 8vo, cloth, pp. vi., 151.

This little work abounds in the practical information that is needed by Americans who intend going to Europe to complete their medical studies. It contains knowledge of the kind that a new-comer is most anxious to gain, and often finds it so difficult to acquire, with regard to the various schools, their faculties, fees, hours for lectures, requirements, etc., of all the principal medical centres in Europe, especially in Germany. This book will prove very useful to the American student in a foreign city, and may save him from loss of time and unnecessary trouble.

THE MEDICO-LEGAL JOURNAL is the title of a handsome monthly published under the

auspices of the Medico-Legal Society of New York, the first number of which appeared in August. The September issue has for a frontispiece a handsome steel portrait of the late Dr. James R. Wood, of New York. From the appearance of the table of contents, and general indications, it is evident that the new arrival has come to stay, and we cordially welcome it to our exchange-list.*

GLEANINGS FROM EXCHANGES.

SURGICAL DISEASES OF THE KIDNEY.—At the annual meeting of the British Medical Association, Mr. Clement Lucas said that the credit of having awakened a new interest in renal diseases, and of having, by experiment on the lower animals, made sure of his ground, was due to the late Professor Simon, of Heidelberg, who in 1869 successfully performed nephrectomy for the cure of a fistula of the ureter following ovariectomy. Since then, extirpation of the kidney has been performed upwards of a hundred times. The operation of nephrotomy has been much more frequently undertaken, and the removal of a stone from the kidney, which used only to be attempted when a sinus or tumor existed, has been several times successfully performed before the kidney has suffered any severe damage.

In casting a glance over diseases of the kidney to determine which might admit of surgical treatment, it is necessary to exclude at once all such diseases as attack equally the two organs: hence the various degenerations included under the name of Bright's disease and lardaceous disease must ever remain outside the province of renal surgery. On the other hand, conditions which disturb the functions of one organ only, for the most part, admit of relief by operation.

Painful moving or floating kidney, being only a mechanical disturbance, admits of relief only by mechanical means. Simple exploration and replacement through an incision in the loin would probably be found sufficient in the majority of cases for the cure of this condition,—the adhesion resulting serving to retain the organ in position. Stitching of the capsule to the parietes, or, as it is termed, nephrorraphy, is a somewhat serious, but still simple, undertaking. In eight cases in which it has been performed the patients all recovered and were relieved. There might still be cases where intense suffering was experienced, and where the other means had failed, which would suggest nephrectomy. Martin, of Berlin, had, in six cases, removed floating kidneys through the peritoneum, and four of these recovered.

Hydronephrosis should be first aspirated, then cut down upon and drained through the

* Terms, \$3 per annum. Published by the Medico-Legal Journal Association, New York.

loin, the cyst-wall being stitched to the parietes. Finally, should the fistula fail to close, the remains of the kidney might be removed through the loin.

In women these tumors had been often mistaken for ovarian tumors, and had been operated upon as such. Being movable, and not forming adhesions till late, some might advocate ventral nephrectomy for these cases before drainage; but such treatment would entail more risk than the method advocated. Abdominal nephrectomy for hydronephrosis will, however, show better results than nephrectomy generally.

Large isolated cysts of the kidney having no communication with the pelvis are rare. They should be aspirated and afterwards drained through the loin.

Hydatids of the kidney, also rare, have a tendency to discharge themselves through the pelvis. When forming tumors, they may generally be cured by aspiration or siphon tapping.

Pyonephrosis, when unilateral, falls under renal surgery. The double pyelitis, with suppuration and distention, which commonly resulted from stricture and enlarged prostate, the author said was inappropriately named "surgical kidney." He suggested the term *reflex pyelitis* as better expressing this condition. Reflex pyelitis, when one-sided, is due to some obstruction in the ureter, and then often gives rise to a large pyonephrosis. Other causes of unilateral pyonephrosis are calculus and strumous pyelitis. After speaking of the diagnosis, and stating that these tumors are more adherent and gave rise to more pain and constitutional disturbance than hydronephrosis, he said that nephrectomy for pyonephrosis had been performed twenty-eight times, and of these seventeen recovered and eleven died; but it was most worthy of notice that among these twenty-eight cases six had previously discharged their contents through a fistula in the loin, and all these recovered. Hence, he argued, it is better to drain a pyonephrosis before performing nephrectomy.

Neoplasms of the kidney can only be treated by nephrectomy, and if this be performed early there might be a good chance of permanent benefit. Generally they are too large to be removed except through the peritoneum, but of five cases removed through the loin, four recovered. Out of sixteen removed by ventral incision, ten died and six recovered.

Calculus of the kidney offers an excellent field for surgical interference, but the difficulty is to make sure of the diagnosis. Many cases of supposed calculus turn out to be strumous kidneys. Two cases were related in which the kidney was explored and even deeply punctured, but no ill result or rise of temperature followed, and the wounds healed primarily. Several cases of nephro-lithotomy were recorded in the Clinical Society's Trans-

actions, and two cases had been performed successfully at Guy's Hospital during the present year. When the kidney is much dilated and damaged it would be a question whether it might not be better to remove it.

After briefly alluding to *injuries to the kidney*, which, though not included under the title of the paper, might suggest nephrectomy, the author proceeded to speak of some details in operating. He recommended for the lumbar operation a combination of two incisions which he had employed as giving the most room,—viz., an oblique incision higher than the colotomy incision, within about half an inch of the last rib and parallel with it, and a vertical incision on the outer margin of the quadratus lumborum, extending from the upper edge of the last rib to the iliac crest. For the transperitoneal operation Langenbuch's incision external to the rectus muscle was to be preferred to the median incision, as it enables the operator better to reach the kidney through the outer layer of meso-colon.

In conclusion, he urged that antiseptic exploration of the kidney through the loin is a simple and not at all a dangerous operation, which may be undertaken without anxiety in any case where calculus is suspected; that it is generally wiser to tap and drain fluid tumors of the kidney before proceeding to remove the diseased organ; that when nephrectomy is decided upon, the extraperitoneal operation through the loin should always be chosen for any tumor it is possible to withdraw through the limited space at disposal; finally, if this course be adopted, the transperitoneal operation will be reserved for large solid tumors, and perhaps some floating kidneys.—*British Medical Journal*.

MISCELLANY.

THE NATIONAL RETAIL DRUGGISTS' ASSOCIATION.—A convention of the retail druggists was recently held in Washington, which resulted in the formation of a permanent organization known as the National Retail Druggists' Association, with the following officers:

President.—Henry Canning, of Boston.

Vice-Presidents.—N. W. Jennings, of Baltimore, and J. B. Bond, of Little Rock, Arkansas.

Secretary.—J. W. Colcord, of Lynn, Massachusetts.

The object of the Association, as embodied in a resolution offered by Professor Remington, of Philadelphia, is "to unite all retail druggists for the purpose of obtaining protection in their business interests from evils known to exist, and for mutual support and co-operation." The evils referred to are understood to be the patent-medicine business, and the general sale of nostrums as articles

of merchandise by grocers and others not dealing legitimately in medicines. When druggists and patent-medicine proprietors fall out, there is a probability that both the physician and the public will be benefited sooner or later.

THE MEDICAL NEWS; QUININE PILLS; AND THE HIGHER WALKS OF (SENSATIONAL) JOURNALISM.—*Gaillard's Journal* for September administers a well-deserved rebuke to the *Medical News* (published in this city) for its discourteous language towards its contemporaries, and its unwarranted aspersion of their motives, in a recent editorial contained in that periodical, and shows that the charges of weakness, cowardice, and venality have been thus far proven only against the management of the *Medical News* itself. We say, with Hamlet,—

"Let it work;
For 'tis the sport, to have the engineer
Hoist with his own petard."

THE CAMDEN COUNTY MEDICAL SOCIETY, having been invited to meet with the Philadelphia County Society, was present at a large and interesting meeting held at the hall of the College of Physicians, Philadelphia, October 10. The exercises consisted in the reading of a paper by Dr. Albert H. Smith on "Abdominal Palpation in Pregnancy," which was followed by an interesting discussion. After these exercises, a social reception was held by the Philadelphia Society, which was generally enjoyed by the large number present.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA held a semi-annual meeting, at which Dr. Carl Seiler read a paper on Phthisis and its Laryngeal Complications, which elicited a valuable discussion. This was followed by a very pleasant social reunion at the hall of the College of Physicians, on the 25th ult. The Society is now in a very flourishing condition.

NOTES AND QUERIES.

THE BALTIMORE MEDICAL COLLEGE.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—In opening the last number of your valuable journal (October 20), I am very much surprised to see that you have published from an anonymous correspondent such a partial statement of the medical colleges of this city, doing injustice to and misrepresenting the Baltimore Medical College. It seems unjust that you did not publish its plan and the names of the members of its Faculty, as you did for the other schools of the city. This school is misrepresented, because the assertion and intimations made in reference to it do not accord with the facts.

The Baltimore Medical College was organized over two years ago, with the avowed object of elevating the standard of medical education,—“not to make many doctors, but good and competent ones.” Its charter simply requires, among other things, that its teachers shall declare their belief in the Christian religion, as its projectors thought the sacredness of the medical profession required good men to promote its elevation.

A preliminary education as a prerequisite to enter the school, its extended sessions of seven and a half months each, and its special laboratory exercises during the session were

features intended to and doubtless have contributed to secure the object set forth,—namely, to afford students ample opportunity to become proficient in their studies.

No official notice has ever been given that the diplomas of this school were not recognized by the West Virginia Board of Health. On the contrary, several of its graduates are now successfully practising medicine in that State. As to the probabilities of the Illinois State Board of Health, it is only necessary to refer to its last (fifth) Annual Report, and compare the published requirements of this school with those of the other medical schools of Maryland, to satisfy any unprejudiced mind that its diplomas will be recognized by that Board.

Your correspondent most unjustly refers to a report, said to have been made at the introductory lecture of this session, that the “establishment of a pulpit is in contemplation.” No one uttered such a sentiment on that occasion, nor even thought of such a thing. The establishment of a hospital was mentioned, and since the opening of the present session hospital privileges have been obtained for the school in one of the most spacious hospitals in the city. The fact is, the Baltimore Medical College is exclusively a medical educational institution.

Your correspondent says, “During the first two sessions lectures were delivered to a class of men, women, and preachers.” During its two sessions it admitted both males and females; the latter sex have now been excluded, as a woman's medical college has been established in this city. As to preachers, only one pastor pursued the course of lectures during the two years, and graduated, he says, chiefly for the love of the science. He is still devoting his services to the pastorate in the church, and not practising medicine.

Your correspondent insinuates that the professors and lecturers in this college are unreliable, and not of sufficient reputation to command the confidence of the profession of this city. Now, Mr. Editor, will you please do the Baltimore Medical College the justice to publish, in connection with this communication, the names of the members of its Faculty (as you have already done for the other medical schools of this city), that your readers may judge of the character and fitness of these men to conduct a medical school? I hereby mail you copies of our announcement and lecture-card for that purpose.

Yours, truly,
W. R. MONROE, M.D., Dean,
249 Bolton Street, Baltimore.

[FACULTY OF THE BALTIMORE MEDICAL COLLEGE.—Harvey L. Byrd, A.M., M.D. (President), Obstetrics, and Diseases of Women and Children; W. Robert Monroe, M.D. (Dean), Materia Medica, Therapeutics, and Hygiene; Thomas Daugherty, A.M., M.D., Physiology; Glanville Rusk, M.D., Surgery; Charles G. Hill, M.D., Anatomy, and (Clinical) Insanity, and Nervous Diseases; Robert H. P. Ellis, M.D., Principles and Practice of Medicine; —, Professor of Chemistry; Lewis M. Eastman, M.D., Microscopy; F. W. Pearson, M.D., (Clinical) Diseases of the Chest and Throat; George P. Yost, M.D., (Clinical) Dermatology; J. H. Scarff, M.D., (Clinical) Gynecology; J. L. Dorksen, M.D., (Clinical) Diseases of the Eye and Ear; Thomas H. Parramore, D.D.S., (Clinical) Oral Surgery; James G. Linthicum, M.D., (Clinical) Obstetrics; Z. K. Wiley, M.D., Demonstrator of Anatomy.]

LETTER FROM DR. BYRD, OF THE BALTIMORE MEDICAL COLLEGE.

“*Magna est veritas et prævalet.*”

EDITOR OF THE MEDICAL TIMES:

Had not absolute falsehood been perpetrated in the notice of the above institution by your special correspondent in the last issue of the *Medical Times*, it would hardly have been necessary to take any notice at all of the illiberal and partisan statements it contained concerning the religious feature of the college, which he attempts to ridicule and to turn to the disadvantage of the institution. But as Christianity has proven “to the Jews a stumbling-block, and to (atheistic) Greeks foolishness,” for nearly nineteen centuries, and is clearly now “a thorn in the flesh” to many others, I will state, for the benefit of those readers of the *Times* who are unfamiliar with the facts in the case, that the charter granted to the college by the Legislature of Maryland requires that all its professors and teachers shall declare their belief in the Christian religion ere entering upon their respective duties in the same; and not that they “should likewise be professors of Christianity.” Women were admitted into the college, as he states, with the hope and expectation that most of them would prepare themselves for missionary work in the Orient or elsewhere, where Christian women physicians have done so much noble work in the evangelization of the heathen. But, as few applied for medical training with such an object in view, the project was abandoned. The statement he

makes about the West Virginia State Board of Health refusing to acknowledge the diploma of the Baltimore Medical College amounts simply to this, and nothing more,—viz.: one of the first graduates of the school, and when it was but little known, appeared before the Board, and, passing an excellent examination, paid his fee, and was licensed to pursue his profession, just as the graduates of other schools had, or ought to have, done before him.

Subsequent graduates of the Baltimore Medical College are pursuing their professions in that State without let or hindrance, so far as I know. The remarks he ventures to make regarding the Illinois Board of Health are entirely gratuitous, as no graduate of this school has ever presented a diploma before it, and I feel confident, from what I have learned of the gentlemen composing the Board, that they would not be likely to stultify themselves at the dictum of one whose animus is so obviously manifest as that of him who has assumed to speak for them in advance of a contingency which may never happen or come to pass. Clergymen of most of the Christian denominations have found from experience that they can listen to the lectures in Baltimore Medical College, and derive pleasure as well as profit in learning that the wisdom displayed in the structure and functions of the human body, and in the action of remedies upon it in disease, is in *perfect harmony* with the teaching of the lowly Nazarene; and a cordial invitation is extended to all such gentlemen as may desire to learn that scientific medicine can be taught without irreverent jests or sacrilegious innuendo or comparison, to call and listen to the teaching in the school as often as their clerical duties or their inclination may allow them to do so. It goes without the saying that a gentleman is privileged in this country to select his associates, professional and lay; and, in pursuing this course, I have found mine, here and elsewhere, among the *best and most* intelligent of the land. Such being the case, it could hardly be expected that I could be induced to mingle or continue an association with others of a different stamp, though it were to my *pecuniary interest* to do so; and this your correspondent and some of his *confrères* very well know and understand, though they should be indebted, to a very great degree, for the little notoriety they have reached, to labors of mine in the past. A few sentences more, and I will have done. The statement concerning the "pulpit" in the Baltimore Medical College is utterly and unqualifiedly false in every particular, and can be so proven by dozens of as respectable gentlemen and ladies as can be found anywhere. I send, with this paper, a copy of the circular of the Baltimore Medical College, which will show the names of fourteen professors and teachers who in every respect are regarded as the peers of any in this city by those in position to sit in judgment in such a matter. I am in position to make revelations which would not be flattering to your correspondent and some of his "professional" associates, but I forbear, as justification, and not retaliation, is the object of this paper, and especially as I feel quite confident that he is the *only* person in Baltimore who, without provocation of any sort, could have *conceived* and written *such* an article.

Very respectfully,

Your obedient servant,

HARVEY L. BYRD, M.D.,

President and Professor Baltimore Medical College,
Baltimore, Maryland.

127 NORTH ARLINGTON AVENUE,
BALTIMORE, October 23, 1883.

CELSUS ON HYDROPHOBIA,—A CORRECTION.

TO THE EDITOR OF THE MEDICAL TIMES:

DEAR SIR,—In requesting the publication of the accompanying letter, a few words may be needed. Some weeks ago an article on hydrophobia appeared in your columns containing a quotation alleged to be from Celsus. It appeared to my son, Dr. Louis W. Atlee, that Celsus had been treated with impropriety and entirely misrepresented. According to the author of that paper, Celsus recommends the forcible drowning of a hydrophobic patient, while the truth is that, while he does advise the throwing of the patient into the water in order to obtain the benefit of the sudden nervous shock, he most carefully tells us to give the patient a bath of warm oil after his ducking, lest harm may come of it.

My son wrote to the editor of the *Medical News* a letter correcting this misstatement (for so I would term it), and implies in this letter—most charitably, one would think—that the misstatement was caused by not consulting Celsus in the original. This supposition the author of the article referred to resents in rough terms in a recent number of the *Medical News*, and an editorial appendix to his communication endorses and upholds him in his views. My son is mentioned there by name in a discourteous tone and in intemperate language. To me, the denial of the correctness of the criticism only aggravates the literary offence.

The criticism was directed against the too prevalent habit of quoting an author at second-hand,—a fruitful source of error and injustice. For instance, we are told in the Holy Scriptures that "the fool saith in his heart, There is no God." Should some one who declares that we read therein, "There is no God," be excited, and roundly assert that he had read it in the original, and get others to back him, when reminded that he had not quoted the whole passage? Most certainly, the most charitable construction to put upon the error was that the writer had been led into making it by confiding in some one who had quoted Celsus, and had neglected himself to verify the citation. As we are wished by him, however, and also by the editor of the *News*, not to believe this, but to believe rather that Celsus was read by him in the original, and that such was his interpretation of the original passage, and as he is offended and the editor is aggrieved that any other belief can be held, another view must be taken, and what this view is any one of ordinary scholarship and of approved ethics can decide for himself. My son is not in this country at present, or he would need no one to act for him on this occasion. I will ask you to publish the accompanying letter, which I am sure will be read with pleasure by any one capable of judging in this matter. Although the reader will see that this communication is dated October 6, it was retained by the editor of the *Medical News* until the 23d, for reasons best known to himself.

Very respectfully yours,

WALTER F. ATLEE, M.D.

BALTIMORE, October 6, 1883.

DR. LOUIS W. ATLEE.

DEAR DOCTOR,—Although not personally acquainted, yet I hope you will excuse a professional brother in thanking you for your defence of the character of that old noble Roman, *princeps medicorum*, from the charge of cruelty in his treatment of the hydrophobic patient, as you have done in your recent paper in the *Philadelphia Medical News* of the 6th instant, under the heading "Celsus on the Treatment of Hydrophobia."

You administer a well-deserved rebuke to the common practice of quoting at second-hand without verifying,—a practice a little too frequent nowadays.

I had occasion to defend the character of Celsus from the charge made in a paper on "Anatomy Historically Considered," by Dr. H., of John's Hospital Union of this city, that "the old Roman was averse to making dissections of the human body as a means of advancing the science of medicine." By referring the gentleman to the original—Liber I., cap. i.—I convinced him of the mistake, and he acknowledged that he had quoted Celsus from a French translation, and he promised to correct the second edition of his paper.

To slander the character of a dead hero in medicine is, to me, as heinous as to mutilate his remains.

Again thanking you, I am, with much respect,

Your obedient servant,

JOHN R. QUINAN.

THE CHICAGO WIRE BEEF-SKEWER REDIVIVUS.

MR. EDITOR,—Dr. Miller is unnecessarily irritated concerning my paper on Chicago beef, and in his letter to the *Times* of October 20 he has fallen into three errors concerning it.

First, He infers that my knowledge of the barbs was obtained from a *retail* dealer, whilst his information came from a *wholesaler*. There are several wholesale dealers in this city, and the person to whom I referred is an extensive, well-known *wholesale butcher*, with three large establishments in this city, and an abattoir in Chicago with corresponding stock-yards, and he ships his supplies direct. I named him, not from any interest in himself or his business, nor did I say that *his* meat was superior to that of others dealing in Chicago beef, but simply because he courteously gave me a large number of the wire skewers for exhibition to the County Medical Society, after other parties had refused to let me have any through fear of their being employed adversely to their interest. "One good turn deserves another."

Second, The alleged extension of danger through the business cards of retailers being attached with the wire barbs to the large number of pieces into which the carcass is cut, is visionary; because the skewers are made in Chicago, *four* only are sent with each steer, and they are returned to the abattoirs, by two firms here at least, for further use. "Multiplication is vexation, division's twice as bad."

Third, The non-acquaintance of Dr. Miller with the clique of retail butchers to whom I referred as opposing the introduction of the beef into this city, does not militate against the fact, for, aside from the agitation noticed at the time in the public newspapers (and the same issue is now in

progress in other places), my information was obtained from three of these persons, who declared their intention to drive the Chicago product out of the market "by hook or by crook."

Finally, I dislike to destroy the fancied security thrown around the community by Dr. Miller and the wholesale firm he refers to as having discontinued the use of the barbs. Chicago people are enterprising, they care nothing for the brotherly love and philanthropy of quiet Philadelphia, the wire skewers admirably fulfil their intended purpose, they are not, as he says, "a thing of the past," but they are *still* used. I have seen several large shipments since Dr. Miller's letter appeared (the last one this morning), in three different wholesale houses, and I enclose two labels with barbs attached, obtained this morning at two of these places,—the third dealer hesitating about letting me have one, as he did before. My paper was written many weeks *after* the alleged swallowing of the barbed skewers, and *after* the supposed repudiation of them by the firm to which the doctor refers, and my object was simply to bring the excellent quality of the beef before the Philadelphia County Medical Society when the question of food and dietetics was being discussed. If I am wrong in my opinion that the skewers are harmless and cannot be swallowed by ordinary mortals, then the consolation remains that an unhopd-for new specialty in medicine has been found,—that of "EXPERT in the extraction of *Chicago barbed-wire beef-skewers*."

I am, sir, with distinguished consideration,
WILLIAM R. D. BLACKWOOD, M.D.,
Neurologist to Presbyterian Hospital, and
Physician to St. Mary's Hospital.

October 27, 1883.

DEATH OF SURGEON-GENERAL CRANE, U.S.A.

The death of Charles H. Crane, M.D., Brigadier-General and Surgeon-General, United States Army, occurred at Washington, October 10, after a brief illness. Until two days before his death he was not considered seriously ill. He had been suffering with an abscess under the tongue, which led to perforation of, and fatal hemorrhage from, the lingual artery. He was graduated in arts at Yale in 1844, and at Harvard Medical Department in 1847. He went at once into the service, and, rapidly rising (being promoted for meritorious service during the war of the Rebellion), he was made colonel and Assistant Surgeon-General in 1866, and brigadier-general and Surgeon-General, July 3, 1882, succeeding Surgeon-General Barnes. He died in the fifty-ninth year of his age. The last honors were paid at Shelton Island, New York, where his remains were interred. By a general order, dated October 10, the Secretary of War pays a tribute to the personal worth and distinguished services of General Crane. The officers of the Medical Department will wear the usual badge of mourning for six months.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 6 TO OCTOBER 27, 1883.

HAMMOND, JOHN F., COLONEL AND SURGEON.—Leave of absence on surgeon's certificate of disability granted April 2, 1883, extended six months on surgeon's certificate of disability. Paragraph 7, S. O. 231, A. G. O., October 8, 1883.

SWIFT, EBENEZER, LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR.—Under the provisions of Section 1 of the act of Congress approved June 30, 1882, is, by operation of law, this day retired from active service, and will proceed to his home. Paragraph 4, S. O. 231, A. G. O., October 8, 1883.

BACHE, DALLAS, MAJOR AND SURGEON.—Assigned to duty at Willet's Point, New York. Paragraph 1, S. O. 238, A. G. O., October 18, 1883.

HARTSUFF, ALBERT, MAJOR AND SURGEON.—Granted leave of absence for fifteen days. Paragraph 2, S. O. 205, Department of the Missouri, October 6, 1883.

HUNTINGTON, DAVID L., MAJOR AND SURGEON.—By direction of the President, will, until further orders, take charge of the office of the Surgeon-General of the Army, and perform the duties pertaining thereto. Paragraph 3, S. O. 234, A. G. O., October 11, 1883.

MEACHAM, FRANK, MAJOR AND SURGEON.—Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

STERNBERG, GEORGE M., MAJOR AND SURGEON.—Granted leave of absence for one month, to date from October 6, 1883, with permission to go beyond the limits of the Department, and to apply for extension of one month. Paragraph 3, S. O. 134, Department of California, October 4, 1883.

TAYLOR, MORSE K., MAJOR AND SURGEON.—Assigned to duty at Fort Sill, I. T. Paragraph 4, S. O. 210, Department of the Missouri, October 13, 1883.

CRONKHITE, H. M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort D. A. Russell, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

HEIZMANN, CHARLES L., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for six months, with permission to go beyond sea. Paragraph 3, S. O. 235, A. G. O., October 15, 1883.

WEISEL, DANIEL, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Fred Steele, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

ARTHUR, W. H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Douglas, Utah. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Washakie, Wyoming. Paragraph 3, S. O. 109, Department of the Platte, October 6, 1883.

MOORE, JOHN, LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR.—To be relieved from duty as Medical Director, Headquarters Department of the Columbia, to proceed to San Francisco, California, and assume charge of the medical purveying depot in that city. Paragraph 10, S. O. 243, A. G. O., October 24, 1883.

HORTON, S. M., MAJOR AND SURGEON.—Leave of absence for one month, with permission to apply for an extension of three months. Paragraph 6, S. O. 216, Department of the Missouri, October 20, 1883.

WOLVERTON, WILLIAM D., MAJOR AND SURGEON.—Granted leave of absence for one month. Paragraph 6, S. O. 201, Department of the East, October 24, 1883.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Columbus Barracks, Columbus, Ohio. Paragraph 1, S. O. 240, A. G. O., October 20, 1883.

MAUS, LOUIS M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort A. Lincoln, D. T. Paragraph 4, S. O. 180, Department of Dakota, October 15, 1883.

MERRILL, J. C., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 7, S. O. 201, Department of the East, October 24, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM OCTOBER 20 TO OCTOBER 27, 1883.

Medical Director W. T. HORD and Medical Inspector C. J. CLEBORNE ordered to the U.S. steam-ship "Hartford," at Panama, on duty connected with a court-martial.

Medical Inspector A. C. GORGAS detached from the Naval Hospital, Chelsea, Massachusetts, November 10, and ordered to the Naval Hospital, Mare Island, California.

Medical Director J. M. BROWNE ordered as member of the National Board of Health.

P. A. Surgeon A. C. HEFFINGER ordered to temporary duty at Navy-Yard, Portsmouth, New Hampshire.

P. A. Surgeon ROBERT WHITING granted leave of absence for three months.

The orders of Surgeon W. J. SIMON and P. A. Surgeon M. H. CRAWFORD in last week's report should read U.S. steam-ship "Shenandoah," instead of U.S. steam-ship "Trenton."

Surgeon W. K. VAN REYFEN detached from the Naval Hospital, New York, and ordered to the U.S. steam-ship "Powhatan."

Surgeon H. M. WELLS detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York.

Medical Inspector A. C. GORGAS's orders modified so that he will be detached from the Naval Hospital, Chelsea, Massachusetts, on December 10, instead of November 10.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 17, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE ON VARICELLA.

Delivered at the Hospital of the University of Pennsylvania

BY LOUIS STARR, M.D.,

Chief of the Clinic for Diseases of Children.

GENTLEMEN,—The child before you is a little more than six years old. She has been under observation about a year, and during this time has enjoyed perfect health. Two days ago she awoke quite as well as usual, but as the day wore on she grew pale, did not take her accustomed interest in play, and in the afternoon exhibited a desire to sit quietly by the fire, thus showing that she was both languid and chilly. She refused her supper entirely, and while she was being undressed for bed an increased heat of skin was noticed. She passed a restless, feverish night.

When I saw her in bed, at noon yesterday, her face was somewhat flushed and listless in expression, and she complained of slight headache. Her tongue was lightly frosted; there was increased thirst, and little or no appetite; there had been no action of the bowels for forty-eight hours, and the morning urine was high-colored and loaded with lithates. The axillary temperature was 100° F., and the pulse counted 110 beats per minute. The lungs were found, upon examination, to be perfectly healthy, and, beyond moderate congestion, the pharynx presented no abnormal appearance. However, when she was stripped, a papular eruption was observed, irregularly scattered over the surface of the chest, abdomen, and back. These papules were isolated, the intervening skin being sound; they were about the shape and size of a split-pea, deep red in color, quite yielding and soft to the touch, and two or three of those situated on the chest showed, upon their summits, a tendency to the formation of vesicles. Further, the eruption, while most marked upon, was not confined to the trunk, for several papules were to be seen on the face, and a few also on the arms and legs.

During the afternoon there was little or no increase in the fever, and sleep was

much more quiet and restful than it had been on the preceding night.

As you see the patient this morning, you notice that, except some pallor and a slightly worn look, there is very little deviation from the normal facial expression. The skin feels moist to the hand, the thermometer indicates an axillary temperature below 99° , and the pulse, even under the excitement of coming before you, is only about 100 per minute. The tongue, you observe, is beginning to clean; there is no thirst, the appetite is returning, the bowels have been moved, and the urine has lost its febrile characters. There has been then, on this which is only the third day of the disease, a marked subsidence of the constitutional symptoms.

Let us next study the eruption. You will notice first that, while most abundant upon the trunk, it is distributed over the whole body, the scalp, even, not being exempt. Upon the face, scalp, and limbs it is mixed in character, there being in these positions both papules, having the features already described, and vesicles; on the other hand, all the papules yesterday observed upon the trunk have undergone conversion into vesicles. These vesicles are transparent, semi-spheroidal in shape, two or three lines in diameter, and cover the whole, or almost the whole, area of the former papules, in the first instance rising sharply defined from the normal skin, in the second being surrounded by a red areola about a line in width. There are two other points of interest, namely: several of the vesicles upon the chest have lost their transparency and are becoming opalescent,—a change due to the transformation of the serum into pus,—and here, upon the right buttock, is a pustule which shows a depression in its centre, or, in other words, is umbilicated,—an appearance depending on the commencement of desiccation.

To sum up the more important features of this clinical history, we have in the midst of health certain symptoms developed, namely: languor, chilliness, headache, loss of appetite, increased thirst, and moderate fever,—prodromes common to the eruptive fevers as a class; in less than twenty-four hours after their onset an eruption of soft red papules appears upon the trunk and rapidly extends over the whole surface of the body; not more than

twelve hours later these begin to be capped with vesicles, and at the end of another twelve hours nearly all of them are converted into vesicles and a few even into pustules; and, finally, at the present period of the disease, the beginning of the third day, there is a marked improvement in the general symptoms. Now, the only fever of childhood following the course and having the peculiar eruptive characters we have studied is varicella, or chicken-pox.

Since this case will have lost its distinguishing features before our next meeting, let me briefly sketch its probable future course, so that you may carry away a complete picture of the disease. Recall for a moment that the general symptoms are rapidly disappearing, that the majority of the papules have become vesicles, that some of the latter are becoming pustules and several even beginning to desiccate. By to-morrow (the fourth day) there will be no evidence of constitutional disturbance, except the moderate weakness which follows every trifling acute illness: the pulse may be feeble, but its frequency will be normal; the tongue will be clean, and the appetite good. All of the remaining papules will have been converted into vesicles, these again into yellowish pustules, and the process of desiccation will be fully established; then the pustules which have not been torn by the child's efforts to relieve the itching—for itching is often a prominent symptom—will show a shrunken appearance at their edges, or sometimes a little yellowish crust at their centres, producing a central depression or umbilication. The drying process, commonly proceeding from the circumference to the centre, will progress rapidly, so that by the sixth day it will be completed and all the pustules converted into thin, light-brown scabs. On the eighth or ninth day these will fall off and leave merely faint red, not depressed, and rapidly disappearing spots. Perhaps, though, if several of the vesicles have been unusually large and deep, and especially if accidentally broken by scratching, a scar, resembling somewhat the pit following a variolous pustule, will be left. Such pits you will usually find on the forehead or face, and it is very rare for more than one or two to be seen in a given case. By the time the crusts have fallen off the child will have, in great part, regained her strength, and with ordinary care there will be no drawback to the return to perfect

health. Varicella has no sequelæ, unless we may so class the occasional attacks of bronchial catarrh, or, rarer still, of pneumonia, produced by careless exposure to cold or wet during the period of eruption or convalescence.

Scarlet fever and measles, the two most common eruptive fevers of childhood, present so few points of similarity to varicella, and so many of dissimilarity, that it is impossible to confuse them when the least thought is exercised. The eruption of varicella in the papular stage might possibly be mistaken for that of measles, but you must remember the course of the two diseases. In measles there is a period of incubation extending over four days, and characterized by severe catarrh of the conjunctivæ and of the nasal and bronchial mucous membranes, as well as by a peculiar rose-colored papulation of the roof of the mouth, soft palate, and uvula; in chicken-pox, on the other hand, the stage of invasion occupies a period of from twelve to eighteen hours, and is attended only by symptoms common to all febrile diseases. Again, the rash in measles appears first upon the skin in front of and behind the ears, instead of on the chest, as is the case with the varicellous rash; then, the papules of the former disease are smaller, firmer to the touch, and deeper red than those of the latter, and they have, too, a tendency to arrange themselves into irregular clusters, somewhat suggestive of cressets. When the varicellous papules begin to be converted into vesicles,—an early occurrence, as you know,—all doubt as to the existence of measles is of course at once set at rest.

There is one disease, however, which presents some superficial features of resemblance to the affection in question, and concerning which it is most important that an early and accurate diagnosis should be made. I refer to variola. The surface-lesion of variola begins as a crop of papules, which pass next into vesicles, next into pustules, and then desiccate with the formation of crusts, which after a time drop off, leaving discolored blotches. Just so far the resemblance to chicken-pox goes. What, then, are the distinctive points? First, the course of variola is peculiar, and very different from varicella, being divided into a series of well-defined stages, each about three days in duration; second, it is marked by two pyrexial periods,—a fever

of invasion and a fever of suppuration or maturation; and third, the eruption, while passing through the same changes, possesses well-marked differences.

The stage of invasion lasts three days, and is marked by bilious vomiting or convulsions, high fever, and severe pain in the head, back, and limbs. Some time on the third day the eruption appears in the form of small, dark-red maculæ, which are soon converted into papules. These are only one-third to two-thirds of a line in diameter, and feel to the fingers like small grains of shot embedded beneath the skin. They are first noticed on the forehead and about the angles of the mouth, and thence extend to the rest of the face, to the neck, trunk, limbs, feet, and hands. With their appearance the fever subsides. They grow somewhat larger until the end of the fifth or beginning of the sixth day, when they become converted into pointed vesicles, this conversion taking place in the order of appearance of the papules: they occupy at first only the summits of the papules, but gradually grow larger until they cover a greater surface than that originally occupied by the papules, become flattened, depressed in the centre or umbilicated, and surmounted by a red areola varying in width. The contents of the vesicles now slowly become transformed into pus, and by the eighth or ninth day they are all converted into pustules; during this transformation the pocks become distended and the umbilication is lost. Coincidentally, too, the secondary fever, the fever of suppuration, sets in. About the twelfth day desiccation begins, and between the fifteenth and nineteenth the brown crusts begin to fall off. The desquamation leaves the surface in different conditions, but usually the ultimate result is the formation of little pits or depressed cicatrices which remain during life.

The eruption of variola may be found on all the visible mucous membranes, as well as upon the skin; the mucous surface first becomes injected, then dotted over the red area a number of papule-like elevations appear; these, after the second day, are converted into white, circular, and umbilicated pseudo-membranous points, which remain four or five days and fall off, leaving a shallow erosion, which heals without the formation of a cicatrix.

With variola, then, varicella stands contrasted by its brief invasion period, the

short duration of its initial fever, the absence of a secondary pyrexia, the difference in the position at which the eruption first appears, the larger size and the softness of the papules, the many minor points of difference in the eruption that have been mentioned, and especially the rapid transition of its phases.

There are several features of variola which are usually mentioned as important distinctions between it and chicken-pox, but which are of little or no diagnostic value. The mistake has arisen from the supposed fact that certain symptoms—the appearance of the eruption on the scalp, the presence of the eruption on visible mucous membranes, the umbilication of the vesicles, and the pitting—are confined to the former disease. Such is by no means the rule; for you will often find in varicella the eruption upon the scalp, as is the case with this patient. So, too, although it is not present in this instance, we see in a majority of cases a varying number of pseudo-membranous points upon the mucous membrane of the cheeks and palate, which differ only from those of variola in being larger and more yellowish in color. Again, as I have pointed out to you to-day, the vesicles may, and frequently do, present an umbilicated appearance, and finally, under certain conditions, slight pitting may follow. The umbilication only occurs in those vesicles which begin to desiccate at their centres, and on close inspection you will be able to detect a minute crust in these positions. Both the cause and appearance differ, therefore, from the variolous umbilication, but the likeness is sufficiently close to be a source of confusion. The pits left by the two diseases are very like, though I have usually found those of varicella broader, shallower, and smoother than those of variola.

Let these points, then, be discarded in forming an opinion, and base the diagnosis upon the well-marked differences in the eruption and in the course of the two diseases.

Varicella is one of the least severe of the diseases of childhood, and demands very simple treatment. Ordinarily the child should be confined to bed until desiccation is completed, and to one room until the crusts have fallen off, and the strength has returned. Sometimes, when the case is very mild, it will be sufficient to keep the patient in one room until convalescence is established; this room must

always be well warmed (72° F.) and ventilated. After desquamation the patient must be taken into the open air in suitable weather, properly clad. While the fever and thirst continue, the diet must consist of milk guarded by lime-water, and plenty of water should be allowed; afterwards, the ordinary articles of food may be gradually added as the appetite returns.

In the way of medicines all the indications will be fulfilled by a simple febrifuge, such as liquor potassii citratis or "effervescent draught," an occasional dose of magnesia or other saline laxative, as demanded by the condition of the bowels, some bland ointment, as ung. aquæ rosæ or ung. zinci oxidi, to allay the itching, and, after the fever has subsided, a tonic, —elix. cinchon. ferrat., for example,—to improve the appetite and build up the general strength.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF GENERAL PATHOLOGY AND CLINICAL MEDICINE.

BY JAMES C. WILSON, M.D.

ICTERUS NEONATORUM.

DR. FREDERICK P. HENRY (*Archives of Medicine*, October, 1883) makes public the result of his investigations in the pathology of this affection. He seeks to determine the question of the mechanical (hepatogenic) or chemical (hæmatogenic) source of the cutaneous pigmentation. He points out that to produce experimentally the first of these two forms of icterus, it would be necessary to increase the bile-pressure *absolutely* by ligation of the hepatic or common bile-duct, or to increase it *relatively* by cutting off a portion of the portal blood-supply.

Now, this latter experiment is performed in the case of every human being by ligation of the umbilical cord. The portal blood-pressure is suddenly and markedly diminished; abnormal conditions of osmosis are established, and when jaundice ensues it is only necessary to prove that the number of the pigment-carriers, *i.e.*, the red blood-cells, has not been reduced, in order to settle the question of the mechanical origin of icterus neonatorum. This he has done by counting the blood-cells in new-born children.

Of the five cases in which this research was carried on, four only have a direct bearing upon the question in hand. These I reproduce in the brief notes of the author of the paper, partly for the sake of making clear his views, partly for their intrinsic value as a contribution to the general knowledge of the blood in new-born children, in whom the blood-cells have not hitherto been made the subject of systematic study.

Case I.—October 19, 1881. Alice K., born at 8 A.M. Count made at 10.30 A.M. The child was of average size, and not cyanosed. Labor had been natural and easy. No symptoms of suspended animation. Child crying lustily when born. Weight, eight and a quarter pounds. The blood was obtained by puncture of the great toe, and was venous-looking. (The average number of red blood-cells per cubic millimetre is, in the adult, at least 5,000,000.)

Number of red cells per cubic mm., 6,410,000.

No white cells in specimen examined.

October 20, 10.30 A.M. Second count in the same case. Child thriving.

Number of red cells per cubic mm., 5,810,000.

October 22. Third count. Child doing well; no appearance of jaundice.

Number of red cells per cubic mm., 5,680,000.

Case II.—John G., born October 20, at 12 (mid-day). Labor easy and natural. Child not asphyxiated; weight, eight pounds. Count No. 1 made at 11 A.M., October 21.

Number red cells per cubic mm., 5,925,000.

This count corresponds closely with count No. 2 in Case No. I, which was made about the same time after birth.

October 23. Count No. 2.

Number red cells per cubic mm., 5,520,000.

Faint yellowish tint of skin.

October 25. Count No. 3.

Number red cells per cubic mm., 4,870,000.

Child deeply jaundiced.

The third case, in which only a single count was made, has no special relation to the subject.

Case IV.—William S., born November 6, 5 A.M.; weight, six and a half pounds.

November 7. Count No. 1.

Number red cells per cubic mm., 4,520,000.

Proportion of white cells to red, 1 to 904.

November 8, 11 A.M. Count No. 2.

Number red cells per cubic mm., 5,335,000.

Proportion of white cells to red, 1 to 711.

Child slightly yellow.

Case V.—Sela F., female, born November 17, 8.15 A.M.; weight, seven pounds; labor rapid and natural; child healthy-looking.

November 19, 10.30 A.M. Count No. 1.
 Number red cells per cubic mm., 5,185,000.
 Proportion of white cells to red, 1 to 350.
 November 21, 4 P.M. Count No. 2.
 Number red cells per cubic mm., 5,495,000.
 Proportion of white cells to red, 1 to 628.
 Slight icteric hue of skin.

If icterus neonatorum were of hæmatogenic origin, in the sense that the coloring-matter of the blood is set free by a rapid disintegration of the corpuscular elements of this tissue, we would expect to find some constant ratio between the intensity of the discoloration and the diminution of the red blood-cells. This Dr. Henry's cases do not establish. It is true that in Case II., the only one in which there was marked jaundice, this condition coincided with a rapid and great diminution of red cells; but it is also true that in Case I. there was a very decided loss in red cells without the occurrence of jaundice, and that in Cases IV. and V. with a slight degree of icterus there was an actual increase in the number of red cells.

The author regards these facts as warranting the conclusion that icterus neonatorum is of mechanical or hepatogenic origin.

To the questions, Why does it not invariably occur, since the umbilical vein is ligatured in all new-born infants? and why is it more frequently met with in delicate children than in the robust? Dr. Henry makes this reply:

The degree of immediate interference with the portal circulation produced by ligature of the umbilical cord depends both upon the anastomoses of the umbilical vein with the veins of the abdominal wall, and upon the vigor of the cardiac contractions. Where there is free anastomosis and a vigorous heart, the intravascular blood-pressure in the hepatic lobules may be maintained to such an extent as to prevent the resorption of bile, and *vice versa*.

It is understood that the foregoing observations have reference to icterus neonatorum, properly so called, and do not apply to cases of jaundice by obstruction.

The paper is of importance as shedding upon a vexed question of pathology the light of actual experimental observation, where hitherto the facts were much obscured by surmise and conjecture. Further work in this spirit is needed to clear up the subject.

THE INFLUENCE OF IODOFORM UPON THE DEVELOPMENT OF GIANT CELLS.

Dr. Emil Marchand (*Virchow's Archiv*, September, 1883), in the course of a series of studies conducted with the purpose of determining the origin of giant cells around foreign bodies, was led to employ iodoform with the view of controlling suppuration in the wounds of the animals subjected to experiment. Strenuous antiseptic precautions with carbolic acid having failed, iodoform was dusted freely into incisions made for the introduction of the foreign substances, which were then closed by sutures. The result was not that which had been looked for. A certain amount of pus-formation occurred, and in some places it was even more abundant than by the former method of operation. At the same time, however, the interesting observation was made that the microscopic appearances at many points were different when iodoform was used from those where the wounds had been treated by carbolic acid. The development of giant cells was retarded to such an extent that in one case it was only after thirty days had elapsed, at a time when iodoform was neither macroscopically nor microscopically to be detected in the tissues, that they were found around the foreign substances (silk threads); whereas, in the wounds not treated by iodoform, giant cells were developed at an early period and in great abundance. The author concludes from these observations that iodoform, in wounds in which the conditions necessary to the development of multinuclear and giant cells are present, is capable of hindering such cell-formation. The favorable influence of iodoform upon the development and course of scrofulous and tubercular granulation-tissue, recognized by most surgeons, has found in these facts a histological explanation. The large-celled, fungous character of such surfaces, in some way altered by the action of iodoform, is brought into the condition of normal granulation-tissue.

The author, without reaching a definite conclusion as to the histogenesis of giant cells, regards it as highly probable that they are developed from fixed connective-tissue cells, and not from extravasated white blood-cells.

RENAL CIRCULATION DURING FEVER.

Dr. Walter Mendelson (*American Journal of the Medical Sciences*, October, 1883)

communicates an account of an experimental research into this subject, conducted at the Pathological Institute of the University of Leipsic. To this paper was awarded the Cartwright Prize for 1883. The research was carried on under the auspices of Professor Cohnheim. The instrument used was invented by C. S. Roy, and used by him previously in studying the functions of the spleen, and, in association with Cohnheim, the circulation in the kidneys. It is called the Oncometer, or "bulk-measurer," and can, it is said, be applied to the kidney without interfering with the functions of the organ, and affords an exact index to the condition of its circulation.

The mechanical principle of the action of this instrument depends upon the expansion and contraction of the organ under investigation (due to variations in the volume of blood circulating in it), causing corresponding variations in the amount of some surrounding confined liquid, as oil. By means of a suitable mechanical appliance called the Oncograph, these variations in bulk, transmitted to the surrounding liquid, are graphically recorded upon the revolving drum of Ludwig's Kymographion.

The dogs which were the subject of the experiments were rendered insensible to pain and immobile by destruction of the thalami optici. It was found that the puncture of one thalamus was sufficient for practical purposes, and that the temperature rose more rapidly and higher than when both thalami were destroyed. Fever was induced by the intravenous injection of pepsin, or by keeping the animals enclosed in a warm-air chamber.

In all, the experiments performed with a view of determining the facts regarding changes in the renal circulation during fever numbered ten (seven with thermic fever, three with pepsin fever), and every experiment, without a single exception, showed during fever a progressive diminution in the volume of the kidney.

Several control experiments were made to settle the question as to the influence of the irritation of the manipulation of the kidney, or the presence of the oncometer, in bringing about contraction of the renal vessels. In these observations the instrument was applied to the kidney and left on for several hours, the bodily temperature being normal. The kidney retained its

original volume as long as the animal remained afebrile, but began to contract upon the superinduction of fever.

The fact that the kidney contains no contractile elements except the blood-vessels makes it evident that changes in the volume of this organ must depend upon changes in the amount of blood contained in its blood-vessels.

Further investigations, to determine the central or peripheral nature of the irritations acting on the renal capillaries, led to the conclusion that "the decrease in the bulk of the kidney during fever is due to a contraction of its vessels, which, in all probability, is the result of a stimulus conveyed to them from the central nervous system; the stimulus being the consequence of irritation of the central vasomotor centres by the abnormally hot blood circulating through them during fever."

The results of these investigations are wholly at variance with the prevalent hypothesis concerning the condition of the renal circulation during fever. The opinion has been heretofore universally held that this condition was that of congestion. It was based upon the general condition of the circulation as observed in more accessible parts of the body, upon the changes occurring in the urine, and upon the state of the organs in post-mortem examination. Instead of being swollen from the distention of its vessels with blood, the kidney of fever is small, shrunken, and in a state of extreme anæmia. The diminution in the amount of urine excreted is due not only to increased loss of water by the lungs and skin, but also to diminished renal circulation. The albuminuria so common in high fevers is readily accounted for by the effect of the local anæmia upon the epithelium of the glomerules, which, insufficiently supplied with arterial blood, becomes so impaired in function as to be permeable to albumen. Repetition of these experiments will be looked for with interest. In the event of these results proving constant, a revision of the whole subject of the renal pathology of the acute febrile diseases will become necessary.

THE TRI-STATE MEDICAL SOCIETY changed its name at its last meeting, and is hereafter to be known as the Mississippi Valley Medical Society.

CONCERNING ARROW-WOUNDS.

BY W. THORNTON PARKER, M.D.

ALTHOUGH many of our Indian tribes are at present armed with the most perfect modern breech-loading rifles, the arrow is still the favorite weapon of many Indian warriors. Swift, silent, accurate, and deadly, it possesses for their purposes many advantages either for the chase or for warfare.

The arrow, one of the oldest of weapons, seems to have nearly outlived its usefulness, and no doubt will soon exist only in museums or in the gentle sport of archery, but at present it is an implement of Indian warfare still worthy of consideration. By our soldiers stationed on the frontier, and inured to constant Indian forays, it has ever been regarded with the greatest aversion, the most dreaded of all missiles to which they are exposed. A single scratch from one of these terrible implements is more to be feared than many a bullet-wound. In one of our frontier hospitals a soldier died in great suffering from what seemed to be a very superficial flesh-wound across the chest, made by an arrow in a skirmish with Indians. The arrow was left on the field, and so it was quite impossible to determine the nature of the poison; but that he was the victim of a poisoned arrow admits of little doubt. The supposition that the Indian shoots his arrows carelessly and wastefully is erroneous. It is possible for the expert marksman to discharge arrows rapidly, but it requires too much time and labor to make a perfect arrow; and, even if the Indian were not inclined to laziness, materials for arrow-making are usually too scarce to allow of much waste of such valuable ammunition in action. The arrow can be shot with as much precision as our best modern revolvers, and at one hundred yards is a deadly weapon. The arrow flies with great swiftness, and has great penetrating power. Several specimens in the Army Medical Museum show how deeply an arrow-head can perforate bone. A soldier rode into Fort Cummings, New Mexico, chased by Apaches. He had received one or two wounds, from the effects of which he died, and in the tree of the saddle he rode upon, an arrow-head was so firmly embedded as to defy removal.

The arrow of the American Indian is indeed skilfully prepared, light, straight, and

strong. The shaft contains carefully-made grooves, to allow the blood to escape easily. Each tribe, and even each warrior, has easily-recognized devices on the shaft, so that they are able to determine from whom the arrow came. To secure the necessary feathering requires skilful fingers; but perhaps the best work on the arrow is shown in the attachment of the head to the shaft. After carefully drying and straightening the shaft, a slot is made into which the arrow-head is carefully fitted and bound with wet sinew. The drying of the fibres contracts until the arrow-head is secure.

Many of the best arrow-heads are manufactured in the Eastern States and sold to Indians through the traders, or even issued by Indian agents; but they are mostly made from scraps of iron hooping, of flint-stone, bone, glass, wood, etc. Not long ago, many agricultural implements, presented to the Indians by admiring Eastern philanthropists, furnished admirable opportunities for the manufacture of countless quiverfuls of arrows.

The attachment of the arrow-head, although secure while dry, rapidly loosens when wet, and it is on this account that it is almost impossible to remove shaft and head from a wound. The head is almost certain to become detached and remain hidden or firmly embedded in the wound.

But if the Indian has shown considerable skill in the manufacture of the arrow, he also possesses remarkable surgical ability in removing an arrow from the wound.

The removal is effected by taking a willow stick and carefully splitting it and rubbing it as smooth as possible; then the pith is carefully cleaned out, and the ends rounded to present as little obstacle as possible in following the wound-track. One stick is introduced very carefully to reach and cover the uppermost fang of the head, and the other to cover the lower fang, and when both are properly adjusted the outer ends are bound to the shaft of the arrow, and all are carefully and slowly withdrawn. When it is possible to push the arrow through until the head is exposed and cut off, it should be done; the shaft can then be drawn backward easily. No traction should ever be made with the shaft unless the head has been removed; for the least effort in this direction is sure to loosen it and leave the head in the wound, thereby adding increased dangers to a wound already serious.

Much difference of opinion seems to exist concerning the poisoning of arrows, and many deny that the American Indian intentionally poisons his arrows; nevertheless it is generally admitted that most of our Indian tribes practise the art of arrow-poisoning and show considerable devilish ingenuity in doing so. In the first place, we must consider that all tribes hold more or less secret all that relates to the education of the warrior, and it is not surprising that the mysteries of arrow-poisoning are not so lightly valued as to enable any one to become familiar with the process. It is very naturally a secret which few warriors would care to communicate. Many substances are used, and undoubtedly some methods elaborate in disgusting details fail to make the arrow as poisonous as some of the simpler methods seem to do. Some rely upon juices pressed from poisonous plants, into which not only the heads but the shafts also are dipped, and others use animal substances and fluids, like rotten flesh and putrid blood, even reserving portions of dead enemies for this purpose, although this last method is very rare indeed. Some use a combination,—for instance, a liver and mashed serpents' heads,—but generally each warrior or family have their own secret method of poisoning, as well as of preparing the "medicine" to make the arrow deadly.

Perhaps the commonest method and least secret of all is to take a beef's liver and stick it full of arrows, like pins in a pin-cushion, and leave it in the sun until the animal mass has rotted away. M. Hoffman* has stated regarding "poisoned arrows," at a recent séance of the Société d'Anthropologie, that "the Apaches [Cayoteres, *sic*] bruise up the heads of rattlesnakes with fragments of deer's liver, allow the mass to become putrid, then dip the arrow-points, and allow them to dry slowly." He also mentions the use of poisonous plants, *i.e.*, the "Spanish bayonet," also red ants pounded together, and other methods.

Besides being more elaborately decorated, if not certainly poisoned, the war arrow differs in make from the plainer hunting arrow. The head of the war arrow is shorter and broader than that of the hunting arrow, and is attached to the shaft at right angles with the slot which fits the bow-

string, the object of this being to allow the arrow in flight more readily to pass between the human ribs, while the head of the hunting arrow, which is long and narrow, is attached perpendicularly to the slot, to allow it to pass readily between the ribs of the running buffalo.

These arrows are also used for conveying fire, either in considerable masses to set fire to hay or to inflammable buildings, or as signals at night. The writer was once with an expedition crossing the plains, and at Cimarron Crossing the whole command was surrounded by large numbers of Indians, who during the night seemed to be in communication with each other from one side of the river to the other by means of fire-arrows.

All these details which I have mentioned show how skilfully the Indian arrow is made, and also what a formidable weapon it must be in the hands of experienced and crafty marksmen.

The following remarkable case illustrates the fact that, while the simplest arrow-wounds may prove mortal, recovery can follow a wound which from its very nature seemed certainly to have no other than a fatal result in prospect:

While passing through the little town of Trinidad, New Mexico, some years ago, I was called to see a man who had received a severe and apparently desperate arrow-wound through the right chest in a skirmish with Indians a day or two before. The arrow had penetrated quite through the right lung. Either the arrow-head had passed quite through between the posterior ribs in the first instance, or had nearly done so, and had finally been pushed out (probably by some one familiar with arrow-wounds). At any rate, enough had passed through to allow of detaching the head from the shaft, and then the shaft itself had been withdrawn the entire length of the wound.

Some hemorrhage had followed this rough surgery, but how much I was unable to ascertain, and the shock, which had at first prostrated the patient, had been recovered from. I found the patient, a strong young man, in bed, apparently comfortable, and without cough. He seemed to have little if any serious pain, but his countenance exhibited suffering. I ordered cold-water compresses, and left some Dover's powders to be taken at intervals, and I also left some quinine and a couple of bottles of wine for his convalescence. Some months afterwards I met the man in robust health, driving a Rocky Mountain four-horse stage-coach, and with only the external marks of his desperate wound remaining. I understood from him

* Philadelphia Medical and Surgical Reporter, July 28, 1883.

that his recovery had been rapid and without any further hemorrhage or other drawbacks. He seemed to have the free use of his lungs also.

Surgeon Bill, U.S.A., has contributed to Ashhurst's "International Encyclopædia of Surgery" a most interesting article on arrow-wounds.* He says that "arrow-wounds penetrating the chest and wounding the lung, although serious, are by no means mortal. . . . If the patient survives the period of hemorrhage the prognosis is favorable, for the consecutive inflammation is usually trifling, and requires no treatment beyond placing the patient at rest and affording a supply of pure warm air." He also directs that "if the head of the arrow has passed from one side of the chest to the other, it should not be operated upon with a view to removal backward, but should be pushed forward between the ribs until the head can be detached from the shaft, and then the shaft withdrawn." Dr. Bill also states that "if the head of the arrow has been left in the lung-tissue, nothing can probably be done for the patient." In Dr. Bill's table of arrow-wounds of the chest, he shows that in eighteen cases there were thirteen deaths,—about 72 per cent. There were five recoveries.

NEWPORT, RHODE ISLAND, August, 1883.

A CONTRIBUTION TO THE STUDY OF RÖTHELN, OR GERMAN MEASLES.

BY BOARDMAN REED, M.D.

Atlantic City, N. J.

A GOOD many cases of this trifling affection have been observed in Atlantic City during the last six weeks. It is, indeed, so unimportant a disease that it would scarcely deserve to be dignified by scientific study but for the fact that it has been often confounded with a mild form of scarlet fever. True, the differences between them are so well marked that to one thoroughly acquainted with them such a mistake is impossible; but physicians who have not given the subject especial attention and followed carefully the current literature concerning it may well be pardoned for the lack of such a thorough acquaintance with the diagnostic differences, since no one text-book among

the dozen or more which I have consulted contains a complete and wholly accurate account of the minor affection.

One of the best accounts of Rôtheln, or German measles (called also Roseola by some of the older authors), was contained in a paper contributed by Dr. Louis A. Duhring to the *Philadelphia Medical Times* of March 26, 1883. So far as I know, Dr. Duhring was the first to call attention to the fact that in most cases of the affection there is enlargement of the chains of lymphatic glands about the neck, which is sometimes very marked indeed, in other cases very slight. I can fully confirm this observation. The cases I have seen during the recent prevalence of the disease here, as well as those previously observed by me, almost without exception presented this important sign.

Dr. Duhring, in the same paper, gave a clear anatomical description of the eruption in its various phases; and it by no means always presents the same appearance.

Dr. John M. Keating also, a few years ago, gave a full and exhaustive account of Rôtheln in a medical paper which I cannot now lay my hands upon.

Most of the authors who have written in text-books upon this subject (though our own Bartholow, and Dr. Edward Ellis, of England, are notable exceptions) convey the idea that Rôtheln is always a febrile affection, the fever being usually of light grade. Most of the cases seen recently by me were quite apyretic. The children ate as usual, and made no complaints. But for the formidable-looking rash, they would have been allowed to play about without any suspicion of their being otherwise than well. Indeed, I encountered several cases among children seen upon the streets or carried by their nurses into shops, the eruption in these instances being supposed to be "tooth-rash." In some cases, however, there was considerable malaise and an accompanying sore throat. The fever, where any existed, which was very seldom, did not go above one hundred or one hundred and one degrees, and always subsided by the second day.

Another point of importance is that there may be, contrary to the statement of certain authors, some desquamation; but this is never so marked as after scarlatina. Most authors deny that there are ever any

* *Op. cit.*, vol. ii. p. 116.

complications or sequelæ, which is also in accordance with my own experience; but one of my colleagues informs me that he has seen a case which was followed by slight albuminuria and dropsy, and Dr. J. Lewis Smith mentions that these, as well as chronic bronchitis, may sometimes follow German measles.

In two of my recent cases the eruption was very partial, and peculiar in other respects. I was called to see two children, brother and sister, who were supposed to have been poisoned. The boy, aged 5, presented a decided dermatitis involving the whole of both cheeks, with considerable œdema of the lower eyelid on one side, and extending in a less intense form to the sides and front of the neck. The skin was of a fiery-red color and very finely punctated, resembling closely the condition produced by an excessive application of kerosene. The face was also hot to the touch, though the remainder of the body was cool and the temperature and pulse not above the normal. The boy had complained of a slight sore throat, and a mild application of kerosene had been made to the neck for a short time the preceding evening. This would have been deemed sufficient to account for such an evident localized dermatitis, but for the coincident condition of the other child. This one, a girl aged 3, presented a diffuse punctate rose-colored rash over the whole of the thorax, front and back, extending slightly over the abdomen, but not at all to the limbs, and leaving the face entirely free. To complicate the matter further, there were two large, irregular-shaped, fiery-red patches of genuine dermatitis, about three inches in circumference, upon the breast of this child. The chains of lymphatic glands about the neck were slightly enlarged in both cases. These eruptions were somewhat longer in disappearing than usual, persisting for four or five days, but in neither case extending beyond the limits described.

Twelve days later I was called to see a third child in the same family on account of a slight erythema of the fauces, accompanied by a very marked enlargement of the submaxillary gland upon one side, as well as a little swelling of the smaller lymphatics about the neck. There was found a fine punctate rash upon the tonsils and velum palati, but *no rash whatever upon any external part of the body.* Tem-

perature and pulse normal, and appetite good.

The foregoing cases are, of course, open to doubt, but I consider them to have been irregular forms of Rötheln, modified by some peculiarity of constitution common to this family.

Sufficient prominence has not been given to the differences in the pulse in Rötheln and scarlatina. It is seldom or never much accelerated in the former, even when there is fever; it is nearly always greatly accelerated in the latter, and out of proportion to the amount of fever.

In the German measles there is usually no catarrh of the eyes, nose, or bronchial tubes, though slight suffusion of the eyes is not rare.

Coincidentally with the epidemic of Rötheln recently observed here, there were a very few sporadic cases of genuine scarlatina, traceable to convalescents brought from Philadelphia; but the only deaths, two in number, occurred in the family of the proprietor of a boarding-house in the extreme northern part of the town. His children became infected with a severe form of the disease from a little patient who boarded in their house at the latter end of summer.

It is no unusual thing for contagious diseases to be thus introduced here from the cities; but the antiseptic influence of the ocean breezes assists in preventing their spread, while the health authorities, as well as the hotel-proprietors, from the powerful motive of self-interest, enforce such rigid quarantine measures that the contagion, as a rule, is promptly stamped out.

In this connection it is proper to state that the health of Atlantic City is now remarkably good. So far as known, there are no cases of any form of fever existing here.

THE USE OF RESORCIN AND CHINOLINE SALICYLATE IN OTORRHOEA.

BY CHARLES H. BURNETT, M.D.

RESORCIN, $C_6H_4(HO)_2$, is a parabenzene, discovered in 1864 by Hlasiwetz and Barth, and introduced into medical practice in 1877 by Andeer. Dr. E. De Rossi, of Rome, was among the first, if not the first, to use this drug in the local treatment of chronic purulent otitis media. In the *Archives of Otology* (1880,

p. 244) Dr. De Rossi reported that he had then been using resorcin for some months, having in this time employed it in two hundred cases of chronic purulent otitis, and he stated that he felt justified in claiming that no remedy at his disposal had ever given him such substantial results in this obstinate affection as resorcin. Cases which had been unsuccessfully treated with caustics for months, yielded after a few applications of this remedy. Resorcin is soluble in alcohol, glycerin, and water, and it may be used pure or in solution in varying proportions. Its therapeutic value would seem to depend upon its antiseptic properties.

I have used powdered resorcin both pure and mixed with boric acid, one part to seven of the latter, blowing it into the fundus of the canal of a discharging ear after the latter had been cleansed either by syringing or by swabbing with absorbent cotton. After the ear is thus cleansed, a little of the powdered resorcin, or borated resorcin, is taken up by means of a short quill on one end of a piece of black-rubber tubing, the other end of which tubing is held in the operator's mouth. Under good illumination of the canal and its fundus with the forehead-mirror, the powdered resorcin may thus be blown into the drum-cavity, if the perforation in the drum-membrane be large enough. Being disposed to deliquesce, it is not a perfect powder for convenient insufflation when used pure, as it is not easily made into a dust. Hence the borated form is preferable. I have used it also by swabbing the mucous cavity of the discharging drum (by first moistening some cotton twisted on the cotton-holder with water, next mixing some of the pure resorcin into a thin paste until it is absorbed by the cotton, then swabbing the ear with it). It certainly has proved a good remedy in many obstinate cases of otorrhœa.

Chinoline Salicylate.—Chinoline is distinctly related to resorcin. Its properties have been recently investigated by Dr. Julius Donath, of Baja, Hungary. Dr. Sadtler, in the *American Journal of Pharmacy* for February, 1882, p. 81, speaks of chinoline and its salts. Chinoline's formula is C_6H_7N , and it is the first of a homologous series of eight similarly constituted alkaloids, each member of which differs from its predecessor by the addition CH_2 . It is manufactured on a large scale from coal-tar,—chinoline and aniline being

found almost without other admixture in the last portions of the distillate known as "dead oil." It is an energetic bacteria-poison in a one-fifth per cent. solution, and in the same proportion it prevents lactic acid fermentation, although it exerts little or no influence on yeast-cells. It forms several salts, among which the tartrate and the salicylate are best known. The latter being a colorless and amorphous powder, I have chosen it for insufflation in chronic purulent otitis media, or otorrhœa.

In December, 1881, I began to use chinoline salicylate, in an undiluted form, as a powder for insufflation into the ear in chronic purulent otitis media, and also in otitis externa diffusa, caused by the growth of aspergillus in the auditory canal, basing my therapeutic attempts with this drug on its properties as just set forth. It is to be blown into the canal and its fundus by the same simple powder-blower already spoken of when discussing resorcin.

It is a detergent and disinfectant powder, and hence a healing application in the above-named diseases. It is especially potent in the destruction of the parasitic aspergillus, one application having in several cases arrested the growth of the fungus, destroyed it, and thus cured the otitis externa caused by the parasite. I found, however, that when used in the pure, undiluted form the powder caused more or less burning, and if the ulceration lay in the skin, as in the cases affected by the parasitic aspergillus, the use of the undiluted powder in some cases caused pain in the ear.

Therefore, I diluted the chinoline salicylate with eight times as much finely-powdered boric acid, and this has given great satisfaction in my hands, especially as a prompt destroyer of the aspergillus.

The physical properties of chinoline salicylate, it being a very light and amorphous powder, render it most convenient for insufflation, and its known chemical nature would lead us to expect, *a priori*, that it would render good aid in many cases of aural discharge.

Our interest in all forms of powders for insufflation into the ear should be great, as it is now very well established that the "dry treatment" by means of powders is preferable to any other local remedial measure in the great majority of cases of diseases of the ear characterized by dis-

charge of pus, sero-pus, or mucus through the external auditory canal.

Just enough borated chinoline salicylate is to be blown into an ear to dust thoroughly the inflamed surface, but not enough to pack the fundus and the canal. Under the application of both resorcin and chinoline the mucous membrane becomes blanched, the odor of decomposing pus is lessened or entirely removed, and the secretions diminish and then cease. Neither drug is a specific, though chinoline almost approaches it in cases of *aspergillus* in the ear. Both drugs are certainly valuable additions to the surgeon's armamentarium. No one but the writer has recommended or used the chinoline salt in ear-diseases, as far as he knows; but it is hoped that it will receive a trial at the hands of others, and that more facts concerning its action shall be forthcoming.

A NEW FORM OF HEMORRHOIDAL FORCEPS.

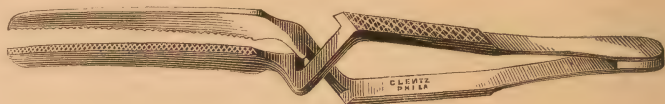
BY P. G. SKILLERN, M.D.

SEVERAL instrument-makers of this city have made, at my request, a simple and efficient instrument for extirpating hemorrhoids. It was devised for the purpose for which Smith's clamp has been employed, for which it is a perfect substitute. Perhaps the description of the forceps may be properly introduced by a brief report of a case in which the instrument was used, which will also illustrate the mode of treatment.

Cavalry recruit, aged 22 years, suffering with a large internal pile, the size of a walnut, which disabled him from his duties, applied to me for treatment last spring. I found, upon examining the parts, that the tumor was much inflamed and very painful. It was reduced, and sedative astringent lotions and ointments were applied. In the course of three days it required to be reduced several times. The inflammation having now been relieved, it was decided a proper time to operate. He was etherized, and placed in position on his left side; the hemorrhoid was drawn well down with a tenaculum, the forceps applied grasping the base of the tumor, and it was excised; the stump was cauterized with the actual cautery before the forceps were removed. There was no hemorrhage. He was then given an opium suppository, and four days afterwards was discharged cured, the parts being perfectly clean.

Equally good results have been obtained in other cases. I will now describe the instrument:

The hemorrhoidal forceps is six and three-quarter inches in length, the blade being two and a half inches long and half an inch wide; it is curved on the flat, and has the approximating surfaces slightly serrated, not sufficient to wound the pile,



but just enough to grasp it tightly and prevent any slipping. It is opened by pressure on the handle, which being relieved, the blades close strongly and firmly, and in its grasp will securely hold a thin sheet of writing-paper. In operating, the patient is placed on the left side, with back to the operator, and the instrument applied with handle pointing posteriorly, and between the nates, so as to be entirely out of the surgeon's way; the pile is then cut and cauterized. The blade, being small, can readily be introduced within the rectum through a speculum. The advantages claimed are—first, its simplicity, a very desirable requisite in all surgical instruments; second, its weight and size; third, its facility of application; and last, its moderate cost.

I prefer excision to injection with carbolic acid, because I think it is safer; the patient is relieved sooner and with less suffering. I always cauterize with actual or galvano-cautery. The duration of the treatment is certainly shorter by this method than by any other. I would excise all external piles, also internal piles when the areolar tissue is greatly thickened and the pile made spongy or fleshy by inflammatory deposit and coagulated blood, and think it is safer even to excise the vascular globular variety, if the forceps be well applied and the stump well cauterized.

DEATH OF PROFESSOR DEPAUL.—On the 22d of October, Professor Depaul, the celebrated obstetrician, died at his native place, near Pau (Basses-Pyrénées). He was a commander of the Legion of Honor, member and formerly president of the Academy of Medicine, and one of the committee of publication of *La France Médicale*. He was 72 years of age, and died of pneumonia.

A CASE OF CONCUSSION OF THE BRAIN IN AN INFANT.

BY P. HOOPER, M.D.

E. K., aged 20 months, was struck on the head with a stone while seated in a baby-coach, as I was informed when called to see the case, a few hours after the accident. When I first saw the patient, she was screaming violently at times, as if in intense pain. The pulse was weak and slow, and the temperature below the normal. She had had several convulsions before I saw her,—afterwards none. Hot applications to the feet, spine, and epigastrium were ordered. Later, on the evening of the same day, I saw the patient again. Reaction had now set in. Ice-bags were placed on the head, and one-fifth of a grain of calomel and one-twentieth of a grain of morphia given every four hours. Five grains of bromide of potassium were also given every three hours. After the second day the morphia was discontinued, and two and a half grains of chloral substituted. On the third day the little patient had convulsions on the side of the body opposite the site of injury. The muscles of the face twitched violently, and the toes were in almost incessant motion. The bromide and the chloral hydrate appeared to check the convulsive movements, and it was used during the entire period of the child's unconsciousness. After a few days the calomel was dispensed with, and iodide of potash given to help absorb the clot of blood on the brain. The bowels moved freely during the sickness. The pupils were dilated and the eyelids firmly closed, and unconsciousness was complete.

After reaction set in, the temperature seldom rose above 103° F. The pulse ranged from 160 to 170, and was quite weak and thready. By keeping the ice constantly on the child's head the temperature was kept within 103° F., and whenever it was taken off the temperature rose very rapidly. After the temperature had fallen to 102° F., and even to 101° F., the pulse still kept at 160 and over, still being weak and thread-like, and even after the temperature had reached the normal the pulse still remained high and weak. Milk constituted the diet, with a soft-boiled egg occasionally. Pieces of ice were from time to time placed in the mouth, and were readily cracked and swallowed by the patient. Whiskey was given with the milk,

as the need of it was apparent from the feebleness of the pulse. The ice was kept constantly on the head for two weeks, day and night, and to the touch the head felt almost as cold as the pieces of ice. Two weeks had passed by, and still the child showed no signs of consciousness; the convulsive movements still continued. It now seemed a debatable question whether trephining the skull should be resorted to: if that were done, it did not seem possible that the child could survive: so expectancy and conservatism were deemed proper. Late on the fifteenth day the child said "Yes" to a question asked by the mother, and for the first time showed any signs of consciousness. For several more days she lay at times in a semi-unconscious state, but the improvement in her condition was noticeable from day to day. Later on, tonics (iron and quinine) were given. For several weeks the child was unable to walk, and could not stand on her feet long at a time. She gradually improved; the tonics were not given long after she was taken from her bed. To-day she is perfectly well. No unfavorable symptoms have developed. The stone, which was thrown by a boy into a pear-tree, came from the upper part of the tree,—one of medium height; on being placed on the scales, it weighed a pound.

3509 NORTH SEVENTEENTH STREET.

A CASE OF TYPHOID FEVER, WITH ABORTION IN THE THIRD MONTH—DEATH—ULCERATION OF PEYER'S PATCHES, AND HIGHLY FATTY KIDNEYS.*

BY HENRY F. FISHER, M.D.

L. K., æt. 43, married, German, was admitted to the Episcopal Hospital, September 15, 1883. The following notes were taken by Dr. George M. Boyd, resident physician. She stated, on admission, that she had been sick two weeks, that the trouble began with general lassitude and headache. Her bowels had been loose, and she had passed blood in small quantities. The abdomen was somewhat tympanitic on percussion, and there was pain complained of on pressure over the right iliac fossa, and gurgling on pressure over this region. The patient seemed rather unusually prostrated;

* Reported to the Pathological Society of Philadelphia, September 27, 1883.

tongue coated with brownish fur and very dry.

September 17.—Temperature this evening 103° ; bowels loose; she complains of pain in both lumbar regions, apparently along the course of the colon.

September 19.—Evening temperature 102° ; heart's action weak, but otherwise seems to be doing well.

September 20.—Temperature 103° ; heart very feeble and irregular. Patient presents all the symptoms of profound shock. Menstruation stated to have come on suddenly this morning with much loss of blood. Vaginal examination reveals widely-open os and large uterus. Several large clots were removed, but failed to remove placenta, which was tightly adherent. Hot-water injections and ergot were ordered, with alcoholic stimulants, but no reaction took place, and the patient died at nine o'clock the same evening.

The post-mortem examination revealed numerous enlarged and ulcerated Peyer's patches in the lower portion of the ileum, inflammation also of the solitary glands, and swollen mesenteric glands. The uterus seemed about the size of a uterus at the beginning or middle of the third month of pregnancy. The kidneys were highly fatty.

N.B.—An embryo, it seems, had been passed, but was, unfortunately, thrown away by the nurse with the other discharges.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF WILLIAM PEPPER, M.D., LL.D., PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA, OCTOBER 14, 1882.

Reported by WILLIAM H. MORRISON, M.D.

SUBACUTE INFLAMMATION OF THE CARTILAGES AND PERIOSTEUM OF THE LOWER PORTION OF THE SPINAL COLUMN.

GENTLEMEN,—I bring before you to-day this aged physician because he is an admirable illustration of the beneficial effects of mechanical appliances in certain troubles about the spine.

He is 70 years old, and one of the oldest living graduates of the University, having graduated forty-seven years ago. Until November 1, 1879, he was in good health. He was then taken ill with pain in the

lumbar region of the spine, extending down the legs. The trouble was considered to be lumbago and sciatica, and was treated accordingly, but without benefit.

During the winter he was attacked by violent pain in the lumbar region, followed by jerking, spasmodic movements of the legs. He could not move the limbs without bringing on the pain and spasms from the waist down. Movement of the body brought on spasm of the lumbar muscles. He had no pains in other parts of his body. He says that the explosive pains felt as though caused by an overcharged battery or the discharge of a cartridge in the spinal column. The attacks of pain and spasm continued for three or four days, and recurred every two or three weeks, and seemed to be influenced by changes in the weather.

He was treated by the administration of anodynes, belladonna, atropia, the use of blisters, acupuncture, and the actual cautery, but with little or no benefit.

In May, 1881, he was so prostrated as to be unable to turn in bed without help, and the least disturbance of the spine would induce spasm of the lower extremities. About the middle of June he was admitted to the hospital. An examination at this time showed that there was no trouble about the brain or upper portion of the spinal cord; that the lower extremities were not paralyzed; that there was no paralysis of the bladder or rectum; that the muscles of the legs were soft and perhaps slightly wasted (this was most marked on the right side); and that he had these severe attacks of pain in the region of the lower lumbar vertebræ. These pains were caused by deep pressure along the lateral processes of the lower vertebræ, and also by pressure along the crest of the ilium. No abdominal tumor or aneurism could be found, which, by pressure on the lumbar spine and nerves emerging from it, could cause the fixed local pain and the radiating pains of which he complained. There did not seem to be any reason to diagnose organic disease of the substance of the cord, but rather irritation of its surface and of the nerves emerging from it. There were no evidences of slow progressive degeneration, either sclerosis or softening.

In sclerosis of the posterior columns usually, and sometimes in sclerosis of the anterior columns, there is considerable

twitching of the lower extremities, and a good deal of darting pain. The pain from which this patient suffered differed entirely from that of ataxia. It came on in spells apparently influenced by the weather, and was also provoked by motion, and particularly by anything which caused pressure, or which imparted the least motion to the lower portion of the spinal column. Ataxic pains usually do not have any reference to changes of weather, and no reference to quiet or motion. They are singularly erratic, now in one place, now in another, lasting a short time, coming and going. In this case, however, they were quite protracted and continued. They were also associated with a degree of muscular spasm which was unlike anything met with in the early stage of locomotor ataxia. Lastly, there was intense local soreness, evidently due to pressure. This is not met with in ataxia. The pains were not associated with any paralysis of the bladder, nor was there any disturbance of sensation in the extremities, as is usual in ataxia. Sclerosis, softening of the cord, and chronic myelitis were therefore excluded, and I concluded that his condition was dependent on disease of the bone or of the ligaments and cartilage of a rheumatic or gouty character, and probably affecting the sheath of the lumbar nerves. At this time there was a distinct projection of the eleventh dorsal vertebra. The question therefore came up whether there had been actual disintegration and caries of the bodies of the upper dorsal or lumbar vertebræ, or whether it was simply a subacute inflammation of the cartilage and periosteum. I need not say that it would be very unusual to have a rapid caries develop in a man of seventy, not scrofulous, and who had met with no injury. On the other hand, subacute gouty and rheumatic inflammation is not uncommon under such circumstances.

I ask him to remove his leather jacket, and you see that the spine of the eleventh dorsal vertebra is still prominent. This may have existed before he was taken sick, or it may be due to thickening and infiltration of the periosteum around the spinous process. I did not at any time feel certain of the existence of caries.

The symptoms, evidently, were to be explained by inflammation, thickening, and pressure upon the nerves at this part of the spinal column. The same symptoms mark

the early stage of angular curvature of the spine. There is in this condition pain in the spine, increased by motion, and spasm and radiating pains in the lower extremities, and these increased by motion. This condition may be simulated by an inflammation of a slower character, not going on to disintegration of the bone.

He was kept in bed, on a nutritious diet, and plaster-of-Paris jackets applied at varying intervals. This treatment was followed by relief of the pain. Systematic manipulation of the limbs, passive motion, and massage were employed; passive movements were also made about the lumbar region when the jackets were off. The leather jacket which he now wears was put on last winter. Three months ago he began to walk with canes, and went to the sea-shore; this was followed by improvement in strength and general health. He is at present in very good condition.

During all this time he has taken very little medicine. He had for some time alterative courses of iodide of potassium and minute doses of mercury; during the greater part of last winter that constituted the whole treatment. Under this treatment he has recovered. His recovery, I think, demonstrates that caries did not exist. If there had been caries and disintegration of two vertebræ, I do not think that our patient would be in the condition in which we see him to-day.

Mechanical support is often of great value in medical cases. This is particularly true in painful affections about the spinal column: you will often obtain cures by simple means with the use of such support, where, without them, the most vigorous efforts would fail.

PLEURISY AND EMPYEMA IN CHILDREN.

I shall next show you a little child who has for some time been under the care of Dr. J. H. Musser, and, as it is an interesting case and one worthy of careful study, he has kindly sent it to us for examination.

The child is a boy, twenty months old, who, on the 4th of July last, was taken sick with severe enterocolitis. This was followed by pain in the chest, and the symptoms of pleurisy of the right side. His appetite is good; he does not vomit; he does not sleep well, does not seem to have fever, sweats a great deal, and has lost some flesh.

On examining the chest, we at once ob-

serve an enormous discolored projection, just outside the line of the right nipple, near the lower margin of the ribs, occupying a space two and a half inches in diameter, and projecting an inch and a half from the normal level.

Let us search for other signs. The breathing is labored, and performed entirely by the left side; the right side is motionless. Percussion on the right side reveals under the clavicle a hollow sound quite different from the normal pulmonary resonance; it resembles the sound produced by percussing over a small cavity. The tympanitic resonance which is naturally heard above a large pleural effusion must not be confounded with the tympanitic resonance heard over a cavity. At the second rib, in front, flatness begins, and is continuous to the base of the chest; behind, the whole of the right side is flat on percussion: this, as you know, is one of the most marked physical signs of effusion. On the left side, the pulmonary resonance is perfect, and even a little exaggerated.

Auscultation of the left side reveals exaggerated breathing, and I also hear a few sharp, dry, crackling râles, near the ear, in different parts of the left chest. On the right side there is absence of vesicular breathing, but there is heard a distant bronchial breathing, most marked in expiration. I think that none of you would mistake this for the bronchial breathing of solidification of the lung. You often hear it said that, where there is a large pleural effusion, in addition to flatness on percussion, there is feebleness or absence of the respiratory murmur. This may be taken as a general statement, but that it is not always true this single case would show. This bronchial breathing would not be mistaken for that of solidification of the lung, because, in the first place, you would recognize that it was not formed close to the ear; in solidification it appears to be immediately under the ear; in the second place, the murmur is less marked on inspiration than on expiration, and, if you listen carefully, you will find that it is exactly like the laryngeal sound caused by the difficult breathing. If the person is instructed to breathe with his mouth open, making no noise in the throat, the murmur disappears. Remember, then, that not rarely in cases of large pleural effusion there is heard a distant bronchial breath-

ing, most marked in expiration, which is transmitted from an obstructed bronchial tube, the larynx, or the trachea, through the tense thoracic walls, to the ear.

We recognize that there is a large pleural effusion, and the formation of this tumor does away with the necessity of discussing its character. In children, the effusion rarely remains serous for any length of time, so that the fact that a child has had a pleural effusion for several weeks is almost conclusive evidence that it is purulent.

The treatment of the early stage of pleurisy in children is often unsatisfactory because the disease is frequently not recognized. The symptoms of acute pleurisy in children are often masked by the symptoms of derangement of the stomach and bowels, or by nervous symptoms simulating the onset of some specific fever. In this case, the symptoms first noted were those of violent enterocolitis, and, after these had passed away, examination of the chest revealed pleuritic effusion. In pleurisy, the pain of which the child complains is often not referred to the chest, but to the stomach, or even to the back, or thigh. This difficulty in diagnosis is only to be overcome by the use of the practice of which I so frequently speak: that is, when we are called to see a patient, and particularly if the patient is a child, for it cannot speak and tell us its symptoms, we fail to do our duty unless we examine the patient critically from head to foot, paying particular attention to the condition of the lungs and heart. By doing this, we recognize those symptoms which cannot be masked. In this way we are able to decide that an attack which seems to be one of violent intestinal disorder is, in reality, acute pleurisy, complicated by the intestinal trouble.

Even if we recognize the early stage, we cannot treat acute pleurisy as successfully in the child as in the adult. The treatment should consist of counter-irritation by leeches, and later, when the effusion has occurred, by blisters, or the application of iodine; and of the administration of quinia in large doses to try to prevent the tendency to suppuration. After the fever has subsided, iodide and acetate of potassium, and, if the heart be irritable, digitalis, should be given. The chances are that despite the best treatment it will rapidly run into an empyema; after pus has

formed it must be gotten rid of as soon as possible.

This brings me to speak of the terminations of empyema in the child. The most favorable is that which is going to occur in this child,—*i.e.*, spontaneous perforation through the chest-wall. This takes place much oftener in children than in adults. The point at which the opening forms is usually on the antero-lateral portion of the chest, about the line of the nipple in the fourth interspace; sometimes being as low as the sixth interspace, as in this case.

As soon as the pus is discharged the swelling subsides, and a ragged fistula is left, communicating with the pleural cavity and discharging pus. When the pus escapes, air enters the chest, and pyo-pneumothorax is produced. The lung cannot at once expand and fill the pleural cavity, but, owing to the elasticity of the ribs, they yield to atmospheric pressure, and are compressed. The affected side of the chest becomes contracted, the opposite shoulder elevated, and the spinal column curved; but after a time the lungs begin slowly to expand, the chest assumes its natural appearance, the spine becomes straightened, and the child is as well as ever. This is the ordinary result of this termination in young children.

Unfortunately, the disease does not always terminate in this way. Frequently, hectic fever develops, and the child dies of exhaustion; or, in its weakened condition, some affection of the stomach or bowels occurs, and it dies of intercurrent disease; or a latent tuberculous tendency, which the child has inherited, is developed, and the child dies from an outbreak of tuberculosis; or the pus may concrete into a semi-solid mass, and we have a lingering illness resembling a slow phthisis. The tissues of the child's chest are so soft that they rarely stand the strain long enough to allow the pus to discharge into other parts. In adults, the empyema may open into the stomach, pericardium, or some other cavity; in the child, it occasionally opens into a bronchial tube. This is, next to spontaneous perforation through the chest-wall, the most favorable termination: this usually results in recovery, but not with as much certainty as when the pus is discharged externally.

If the effusion does not quickly disappear under the plan of treatment before

mentioned, you should make an exploratory puncture with a hypodermic needle, or the small needle of the aspirator, in order to determine the character of the fluid. If pus be present, it should be drawn off with the aspirator, and the opening allowed to close. It is always a good plan in children to try the effect of a single puncture; sometimes there is an immediate apposition of the pleural walls, and no further collection of pus occurs. This plan is much less successful in adults; still, it is worth trying. The chances are, however, even in children, that the accumulation will reappear: it then becomes necessary to adopt some more radical plan of treatment. The elasticity of the thoracic walls renders unnecessary such serious operations as making an incision into the chest and removing a portion of a rib. The best methods of treatment are the introduction of a silver tube with a valve, so that it may be opened twice a day to allow the escape of pus, and thorough drainage. The latter is accomplished by arming a strong curved needle with a drainage-tube, passing it in one intercostal space and out of the one above, drawing the tube through and knotting it. The child is able to go about as usual, and the amount of pus gradually diminishes. This plan has succeeded very uniformly in my hands. I have also seen good results from the use of the silver tube. Disinfecting injections are not so necessary in the child as in the adult, for the sinking in of the ribs prevents much pneumothorax.

In this case, expectant treatment is proper, for in a few days the chest will open spontaneously: if it does not, I shall have it lanced. I shall have the patient come back in a month, and we shall see what has been accomplished in that time.

TRANSLATIONS.

THE REMOTE EFFECTS OF ALCOHOL.—At a recent congress, held at Rouen, of the Association Française pour l'Avancement des Sciences, M. Picqué reported a case of fracture of the external malleolus, and abrasions of the face, in a patient presenting the appearance of alcoholism. The following day erysipelas developed in the face, extended to the scalp, and the patient succumbed from hyperpyrexia.

At the autopsy the examination confirmed the diagnosis, and revealed a suppurating synovitis in the articulation corresponding with the fracture; also a cirrhotic liver. The reporter concluded that the erysipelas was aggravated under the influence of the visceral lesions, especially of the cirrhosis of the liver, and that the erysipelas thus aggravated had caused, by auto-inoculation of the individual, the synovitis which nothing else explained. Prof. Verneuil, in discussing this case, pointed out the importance of accumulating a large number of cases in order to determine the influence of diathesis upon the healing of wounds. The fatal result in this case he could only attribute to a modification of the organism from the long-continued use of alcohol, which is also shown by the condition of the liver.—*Revue de Thérapeutique Médico-Chirurgicale*, No. 19.

THE ALKALOIDS OF COTO BARK.—Alber-toni (*Archiv für Exper. Path. und Pharmac.*, September, 1883) discusses the properties of cotoin and paracotoin, derived respectively from the two kinds of bark, coto verum and paracoto. He finds that cotoin does not hinder putrefaction or the development of bacteria. Injected into the jugular vein, it causes dilatation of the vessels of the abdominal cavity; the blood-circulation in the intestines being increased. Therapeutically it is considered of value in diarrhoea accompanying mental disease, in chronic intestinal catarrh, and in looseness of cachectic states, such as phthisis; it is contra-indicated in hyperæmia of the intestines and hemorrhage. Frommüller thought it of service also in restraining the sweating of consumptives. The usual dose is from two to three grains. Paracotoin he regards as a weaker preparation in its physiological action. [Prof. Balz, of Tokio, is said to have treated cholera successfully with three-grain doses of paracotoin given hypodermically. Jobst denies to cotoin any constitutional effects. See U. S. Dispensatory, p. 1624.—ED.]

TREATMENT OF SUPPURATIVE PHLEBITIS.—Dr. Demons recommends active interference in a case of suppurative phlebitis of accessible venous trunks, instead of waiting to determine post mortem the existence of metastatic abscesses in the lungs in order to make out the diagnosis of purulent infection. He treated one case of inflammation of the veins at the

bend of the elbow, following a cut with a razor, by longitudinally cutting down upon the veins, which he found full of pus; this he removed, and cauterized the lining membrane with a solution of chloride of zinc (ten per cent.), covering the part with a Lister dressing. The patient recovered. Since the veterinary surgeons sometimes extirpate the jugular vein under similar circumstances, he asks if this means would not perhaps be preferable.—*Revue de Thérapeutique Médico-Chirurgicale*, No. 19.

ANÆSTHESIA OF THE LARYNX BY TÜRCK—SCHROETTER'S METHOD.—Paulsen, in a communication to the *Monatsschrift für Ohrenheilkunde*, adopted Schroetter's method for producing anæsthesia of the larynx in a case of laryngeal polypus. He applied directly to the larynx pure chloroform, painting the surface twelve times; this provoked a hyperæmia of the mucous membrane, which favored the absorption of morphia, which was applied in the same way (a ten per cent. watery solution of the muriate of morphia). He advised the patient not to swallow during the application, and after each painting to gargle with a solution of tannin. Twelve hours after this preparatory treatment the larynx in all parts was insensible to the contact of the sound. The extirpation of the tumor was then readily accomplished. The proceeding is troublesome and disagreeable, and is to be resorted to only in cases of necessity.

INOCULATION OF ERYSIPELAS.—Dr. Fehleisen, in a paper read before the recent Congress of the German Surgical Association at Berlin, reported the results of numerous culture-experiments made with the micrococcus of erysipelas, and also some clinical cases in which the cocci were introduced into tumors. He also presented a patient who had the usual appearances of genuine facial erysipelas, who also had lymphoma of the neck, for which the inoculation had been made. The preparation used was the thirty-fourth generation of gelatin culture of the erysipelas germs; one inoculation was made, and on the following morning the patient had a chill, and at the same time the points of inoculation exhibited erysipelatous redness, which subsequently spread to the face.—*Berliner Klinische Wochenschrift*, No. 20.

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EDITORIAL.

THE CRUISE OF THE "CORWIN."

THE United States revenue-cutter "Corwin" was sent in the spring of 1881 to the Arctic Ocean in search of the unfortunate "Jeannette" and the crews of two missing whaling-vessels. She sailed from San Francisco on May 2, and returned in October, having visited Alaska at intervals along its entire coast-line from Behring's Straits to Point Barrow, including Kotzebue Sound, also the Siberian shore from the Straits to the North Cape, landing on Herald and Wrangel Islands, and on returning spending some time at Ounalaska, one of the Aleutian Islands. Science having put the expedition under contribution, a valuable report* has recently been issued by the government, containing some very interesting information, consisting of medical and anthropological as well as botanical and ornithological notes and memoranda.

The birds of the Behring Sea and the Arctic Ocean were made a subject of systematic study by E. W. Nelson: this paper is illustrated by a number of chromo-lithographs, and contains the results of five years' previous study at Saint Michael's, Alaska, as well as the observations taken upon this expedition. Some botanical notes are contributed to the work by John Muir; but the most interesting portion to us is the first section, by Dr. Irving C. Rosse, who makes a very interesting report of his medical and anthropological observations. He notices the practical demonstration of the well-

known fact that our sensations of cold and heat are not regulated directly by the rise or fall of the thermometer, but are largely relative, as a temperature steadily below zero was not only well borne but did not cause discomfort to the party; he also remarked the curious circumstance that cold weather and exposure were better sustained by the ship's crew than by the natives. On the other hand, when the temperature indicated by the thermometer was 60° (F.) the heat of the sun was almost overpowering to the sailors. This leads to a practical distinction by Dr. Rosse between "physical" and "physiological" heat or cold.

He found that while the ethnical points that distinguish the Eskimo from the North American Indian are distinctly marked, this cannot be said to be the case between the Eskimo and the so-called Tschutshi of the Asiatic coast. Reasoning from this and other facts, Dr. Rosse considers them of Asiatic origin, a view which receives further confirmation from their ability to cross Behring's Straits in boats, and from their practice of tattooing themselves, a custom which was evidently brought from Japan. He says, "Natives cross and re-cross Behring's Straits to-day on the ice, and in primitive skin canoes not unlike Cape Cod dories, which have not been improved in construction since the days of prehistoric man." Indeed, for some unknown reasons, their development ceased at the hunting and fishing stage: they are therefore the living representatives of the race that was contemporaneous with the cave-bear and mammoth in Europe. In some particulars Dr. Rosse differs from other Asiatic voyagers in some of his impressions of the Eskimo, or Innuits as they call themselves. According to his experience, they do not have the enormous appetites with which they have been credited; indeed, several of them, who accompanied the party, invariably ate less than the sailors did. It is true that when half famished they will eat

* Cruise of the Revenue-Steamer "Corwin" in Alaska and the North-West Arctic Ocean in 1881. Notes and Memoranda, Medical and Anthropological; Botanical; Ornithological. Washington, Government Printing-Office, 1883. 4to, cloth, pp. 120.

to repletion; but so will Europeans. He observed that a day's tramp in the sharp crisp air of the Arctic regions will develop such latent gastronomic capabilities in any vigorous man as will surprise him, and the Eskimo are not exceptions to this; but the popular notion of their enormous appetites is set down as a current fallacy, partly due to some of the repulsive articles of their dietary.

Contrary to general opinion, also, it is stated that their intellectual capacity is by no means feeble; they learn quickly, show great aptitude for trade, and acquire languages easily. Examination of their skulls does not indicate the low grade of intellectuality which they are commonly credited with, but they are well formed, and possess large brain-capacity, averaging as high as the French or Germans. They are honest, truthful, and good-natured, except when they have been corrupted by the bad examples of white men. Their ideas of family and sexual morality are low, their religion simply Shamanism. He saw nothing that would give foundation for the current belief that the dwellers under the Arctic Circle have less active sexual passions than those of warmer climes. The "heyday in their blood" is not cooled to any appreciable extent by their icy environment. With their intelligence and capacity for improvement, this would seem a most promising field for missionary labor. In the terms of Dr. Rosse, it affords "a brilliant opportunity for some one full of propagandism and charity to imitate the acts of the modern apostles, and extend the influence of civilization to the gay, lively, curious, and talkative hyperboreans whose home is under the midnight sun and on the borders of the Icy Sea." Attention is directed to their mal-hygienic mode of life, and, in consequence, to the terrible ravages made by epidemic diseases among them. They also suffer greatly from the deleterious effects of alcoholic liquors of very inferior

character, which are surreptitiously sold by traders under the names of "Pain-Killer," "Bay Rum," "Jamaica Ginger," "Florida Water," etc., which he found to be only cheap alcohol with a little coloring-matter added. Although the taste is an acquired one, they seem to have an uncontrollable craving for alcoholic drinks, frequent indulgence in which favors their extermination by famine. With regard to the use of alcoholic drinks by Arctic voyagers, Dr. Rosse considers them almost a physiological necessity, if employed in moderation. He believes beer and claret to have especial value as anti-scorbutics, when taken with food, during an Arctic voyage; and he considers that it would be better for the natives from a moral point of view if these could be substituted for the adulterated drinks referred to, or used in place of "kvass," a vile native decoction made from sugar and flour, which are obtained in unlimited quantities from the traders who are forbidden to deal openly in alcoholic liquors. As Alaska and the Aleutian Islands are now a part of the United States, these reports, records of personal observations of the inhabitants of these places, are of especial interest and value.

RESULTS OF THE LABORS OF THE CHOLERA COMMISSIONS IN EGYPT.

THE official report of Dr. Koch's commission on the cholera in Egypt, with the results of his investigations, has just been published in the *Imperial German Gazette*.* Although the epidemic was on the decline when the Commission arrived in Alexandria, the objects sought to be attained by its appointment were kept prominently in view, and quarters were obtained in the Greek Hospital, where the necessary examinations and experiments were made. The autopsies were conducted

* Medical Press, October 24, 1883.

with great care, directly after death, in order to avoid changes incident upon putrefaction. Specimens of blood of typical cases of the disease and of their ejecta and excreta were also carefully examined. While the dissection of the corpses proved beyond doubt that the patients had really died from cholera, and not from diarrhœa or so-called cholérine, it was further demonstrated that in the intestinal tract there existed a peculiar form of bacteria in the utricular glands of the mucous membrane, and proliferating between the epithelium of the gland and the basement membrane, which was also found on the villi and even penetrating into their substance. In grave cases, with bloody infiltrations into the mucous membrane, these microbes were very numerous, and extended as deep as the muscular layer. Their favorite site appeared to be in the lower part of the small intestine.

These bacteria are rod-like, and therefore belong to the bacilli; they come nearest in size and form to the bacilli found associated with glanders. Dr. Koch, however, makes the significant statement that "if this discovery had not been made in perfectly fresh corpses, one could have made but little use, or no use at all, of it, for the influence of putrefaction is able to bring about similar bacterial vegetations in the intestines."* To determine the question whether these bacteria are the primary manifestation of the disease in the intestine, or are preceded by general infection, will require further study, and the Commission will proceed to India to continue its scientific investigations, the epidemic in Egypt having subsided. Thus far only a few culture-experiments have been made, but all attempts to communicate the disease to the lower animals, including monkeys, have failed. In the hos-

pital, however, a laundress exclusively engaged in washing the linen of cholera patients was seized by the disease, which would lend some weight to the opinion of its possessing a truly contagious character, a view which seems to be gaining ground among medical men in India.†

Altogether, the results obtained have answered the original purpose of the preliminary investigation; but additional work is needed to solve finally the problem of the cause of cholera and to formulate the laws of its development. The fact that the disease has declined to such a marked extent in Egypt suggests the thought that peculiar conditions are required, or a special pabulum provided, in order that the disease may prevail epidemically, and that where these no longer exist the disease disappears.

In the *Egyptian Gazette* of September 27 there is contained a preliminary report of Surgeon-General Hunter, of the English Commission. From this‡ we learn that he obtained evidence, conclusive in his opinion, that cholera is endemic in Egypt, and that it had existed for some time before its appearance at Damietta, the cases being reported as diarrhœa or cholérine. He stated that the disorder giving rise to many of the cases of diarrhœa, which is so common and so fatal in Egypt, is in reality only a form of cholera. These views are opposed by Drs. Sierra and Vassalopoulos, of Alexandria, who maintain, in communications published in the *Progrès Médical*, the essential distinction between sporadic and Asiatic cholera, and insist that the latter was imported into Egypt from its habitat in India. The Board of Health of Alexandria has since issued a manifesto protesting against the views of Dr. Hunter "as tending to mislead public opinion and to encourage the belief that the cholera has been endemic

* "Wenn dieser Befund nicht an ganz frischen Leichen gewonnen wäre, dann hatte man ihn wenig oder gar nicht verwerthen können, weil der Einfluss der Fäulnis an Stande ist, ähnliche Bacterienvegetationen in Darm zu veranlassen."
—*Berlin. Klin. Wochenschrift*.

† Paper. by Brigade-Surgeon Scriven, *British Medical Journal*, October 27, 1883.

‡ *Medical Times and Gazette*, September 29, 1883, p. 377.

in Egypt since 1865."* It will, however, require more than a protest to remove the filth, overcrowding, and entire neglect of sanitation discovered by Dr. Hunter in Egypt, which afford a suitable soil for the propagation and extension of cholera so graphically described in his further Report,† and which make his conclusions worthy of serious consideration.

PROPAGATION OF DISEASE BY BOOKS.

THE *British Medical Journal* having recently editorially directed attention to the danger of the spread of contagious diseases by borrowed or second-hand books, the article has been extensively copied into other medical journals, and, as a rule, without comment. The danger seems to be practically quite a remote one, since the loaning of books, which is carried on by the great circulating libraries in England to a much wider extent than anywhere in this country, has not given rise to the serious consequences which have been feared. In this age of preventive medicine and investigation into the causes of disease, no such active source of contagion could have escaped notice in case it really existed. There are several reasons why we may dismiss apprehension of this from our minds as a prominent or even as a subordinate source of disease under ordinary circumstances. In the first place, cases of variola, scarlatina, and measles—for these are probably the only diseases that might be at all supposed to be communicated by such means—are usually isolated by those in charge, and would not be allowed to read books, even if they should wish to, during the period when the disease is most communicable. We do not regard it as supposable that typhoid fever could be communicated in this way, although mentioned by the writer of the article referred to. Secondly, reading-people are sufficiently

intelligent and careful not to give borrowed books from a circulating library to a case of zymotic disease, even though the danger be a remote one. Thirdly, the manner in which a book is used is not favorable to acquiring or conveying the contagium, if there is such an entity. There are many sources of contagion that are much more important: paper money, for instance, which passes from hand to hand and is generally carried about the person; the furniture in the waiting-rooms at railroad-depots; the street-cars, with their cushions and dirty straw; the city hacks; the pawnbrokers' shops; even the air we breathe often contains epithelial cells and bacilli and spores innumerable, and in that of hospital wards peculiar bacteria have been detected. The recommendation to keep the books used by patients suffering with contagious diseases from being carried into other wards is certainly judicious, and is already adopted in our general hospitals, to which, however, such cases, as a rule, are not admitted: should they get in by accident, they are kept rigidly secluded and quarantined. The application of these rules to books, therefore, can scarcely be said to extend outside the walls of hospitals.

LEADING ARTICLES.

OPIUM-SMOKING.

THE Chinese practice of smoking opium has been the theme of a great deal of discussion, rather of a political and ethical character, however, than medical. Within a short time articles have appeared in several medical journals, which indicate that the subject is now beginning to attract the attention which it deserves, and it is possible that we may soon arrive at a clearer knowledge of the real cause of the peculiar effects which are known to follow this method of using the drug.

Dr. J. G. Kerr,‡ in a short communication, describes the modes of preparation of the watery extract, which is made under

* *British Medical Journal*, October 27, p. 841.

† *Medical Times and Gazette*, *loc. cit.*

‡ *Medical News*, October 13, 1883.

the supervision of the British government, and explains the method pursued by the natives, as follows:

"The smoker, lying on his couch or divan, with the pipe, lamp, and other implements on a tray, takes a portion of the opium-extract on the point of a wire and warms it carefully over the flame of the lamp. He dips it again in the little jar of opium until the requisite quantity adheres, alternately warming it over the flame of the lamp and pressing it on the flat bowl of the pipe, turning it over and over, and working it carefully on the end of the wire until it is reduced to the state of a soft solid by the evaporation of a portion of the water contained in the semi-fluid extract. During this process it swells up into a light porous mass from the formation of steam, and it must, therefore, be heated up to the boiling-point of water, and the presence of water prevents combustion.

"When the little bolus is brought to the exact state fitted for smoking, being still a soft solid, it is worked into a ring around the wire, the point of the wire inserted into the round hole of the pipe, and by twirling the wire around while withdrawing it the opium is deposited on the pipe and adheres to it, the hole in the ring of opium corresponding to the hole in the bowl of the pipe.* The stem being now applied to the lips and the bowl held over the lamp, the flame is drawn in over the opium, converting into vapor all the volatilizable material it contains. To understand what takes place it is important to note that preparatory to smoking the opium has been slowly and carefully heated until steam has been formed in its substance. While in this heated state and with water enough to prevent charring and to form more steam, the flame of the lamp is drawn over it by successive inhalations, producing the so-called smoke and leaving a solid residue, the 'in-she' or 'secoñds.' The smoke is inhaled into the lungs and comes in contact with the immense surface of the respiratory mucous membrane, and through it acts upon the system."

The physiological effects of the inhalation of the smoke (or more properly, as pointed out by Dr. Kerr, of the vapor mingled with the products of combustion

from the lamp) are not described in this article, as they are supposed to be generally known. Stupefying and narcotic in its immediate effects, when indulged in as a practice and to excess it produces emaciation, anæmia, and sluggishness, destroying healthy activity of mind and body, and rendering the victim unfit for performing life's duties, favoring early death, and possibly suicide. It is true, however, that many indulge occasionally in the pipe without any very evident ill effects, and a fatal narcosis from the immediate action of the opium when used in this way is unknown, thus differing materially from the other forms of opium-addiction.

Mr. Hugh McCallum has recently written in the *China Review* an interesting article on opium-smoking,† in which he claims that the effects of opium-eating and opium-smoking are not analogous, and, in fact, are altogether different. Knowing that the principal narcotic agent contained in opium is largely destroyed by the prolonged boiling and baking over a naked fire in an open vessel, according to the process generally followed in preparing the drug for smoking, and that only an infinitesimal quantity of morphia could be inhaled in the act of smoking, if any, he proceeded to test practically the question whether the effect of the pipe is in proportion to the amount of morphia contained in the drug. Making a number of preparations of different morphia strength and giving them to experienced smokers to use and report, he found not only that they were unable to appreciate the difference, but that the preparation of the highest morphia strength was considered as not being as good as another alike in every other respect, but containing only one-half as much morphia. Opium *minus morphia* was pronounced very good by an old opium-smoker, who on another trial smoked an equivalent of twenty grains of morphia in about twelve hours without unusual effects. The Chinese expert bases his opinion of the drug upon the physical appearance of the extract, its behavior in the flame of the lamp, and its smell, not on its effect when smoked: his judgment, therefore, is not governed by the alkaloid richness, but by other qualities. Some specimens were likewise submitted to these experts with a similar result: they were

* This is not properly a bowl, but a flat surface with a hole in it.

† See also *Druggists Circular and Chemical Gazette*, October, 1883.

unable to sort them according to their true value. Dr. McCallum says in conclusion, as the result of his investigations,—

“We have an opium expert, a man whose occupation is to judge of the quality of opium for smoking-purposes, gravely asserting that the Hong-Kong farmer’s best quality of ‘prepared opium,’ containing seven per cent. of morphine, is not good. Not only that, but he condemns the same opium altogether when it contains fifteen and twenty-five per cent. of *added* morphine, and states it is not opium at all. At the same time, opium practically containing no morphine receives only qualified condemnation. The old opium-smoker does not recognize the same differences as the expert. He classes prepared opium containing seven per cent. of morphine, the same opium with fifteen per cent. of morphine added to it, and an opium practically free from morphine, together, all as being equally good. An opium containing twenty-five per cent. of added morphine is stated not to be good. Such statements could never have been made had these men based their judgment on the well-known effects produced by opium and morphine when eaten. Had any one dared to make a similar series of experiments on opium-eaters, there cannot be the shadow of a doubt but the experimenter would have made the acquaintance of the coroner’s court and been indicted for manslaughter. Although these facts show that morphine has little if anything to do with the pleasure of opium-smokers, it cannot be denied that they appear to derive much pleasure and consolation from their pipe. Whence the pleasure? What gives rise to it? What are the temporary and permanent effects caused by smoking opium? These are questions that have not yet been satisfactorily answered; yet they ought to be, and in a scientific manner. Until this is done, the Anti-Opium Society and its supporters are not justified in branding the opium-trade with infamy, or the lovers of a pipe of opium as degraded beings.”

Similar views to the above are expressed in a little work published last year in England, entitled “The Other Side of the Opium Question,” written by Mr. W. J. Moore, who declares that the drug is “a comfort, a solace, a necessity, and often a blessing” to the Chinese. Certainly we would not wish to substitute for it any

other form of opium-indulgence with which we are acquainted, and cannot believe that the evil effects of opium-smoking are at all comparable to those of the abuse of alcohol, which is the bane of “Western” civilized life.

NOTES FROM SPECIAL CORRESPONDENTS.

TOKIO.

RUMORS of the prevalence of Asiatic cholera in the China ports and beyond are continually reaching us. Thus far, however, but few cases have occurred in Tokio or any of the open ports of Japan, and the near approach of cold weather will, it is hoped, prevent any further spread in this direction. Swatow, in China, was recently declared by the Central Board of Health to be infected with Asiatic cholera, and accordingly a medical inspection at the open ports, and detention if necessary, of vessels coming from Swatow, were ordered by the authorities.

The experience of the past few years seems to point to a periodicity in the visits of cholera to these islands,—slight epidemics occurring in localities every other year, and more severe epidemics every fourth year. The type of cholera sometimes epidemic in Japan, although true Asiatic, does not seem to be of so virulent a character as that met with in China and India, a fact in all probability due to a better system of public sanitation existing here than in either India or China.

Kakke, or *beri beri*, a disease characterized by general muscular degeneration and nerve-atrophy, and in some forms accompanied by extensive anasarca, is just now claiming many victims in Yokohama and at the capital. As kakke patients, if not too far gone, rapidly recover by sojourning a few weeks in the mountains, the number of deaths seems low compared with the severity of the disease. In an article upon the diagnosis and treatment of kakke in the *Philadelphia Medical Times*, the acquirement of a better acquaintance with this disease on the part of physicians at home, and especially in large cities, was urged, as it was therein stated that foreigners frequently come to our shores suffering from this disease or bearing its seeds in their systems. In this connection, the following, taken from one of the Yokohama papers, is not without interest:

“The arrival of the *Riujo-Kwan* at Honolulu, with a number of cases of *Kakke* on board, would seem to have created some alarm in that port. We judge so, at least, from its having been found necessary to publish the following certificate:

"H. I. J. M. S. "RIUJIO KWAN."

"Medical Report on the Sickness.

"We the undersigned, G. Trousseau, M.D., and Arthur Mouritz, M.D., have, this third day of July, 1883, visited the Japanese war-ship "Riujio Kwan," by order of the President of the Board of Health.

"After a short interview with the captain, we visited the quarters of the seamen, and were shown by the doctor twenty-six men laid up in their hammocks. These men are all suffering from a disease peculiar to Asiatic races, principally the Japanese and Chinese, and known in Japan as kaki or kakke, and in the medical world as Beriberi (French name). We are thoroughly familiar with the disease, rather prevalent in the Hawaiian Islands amongst the Chinese laborers. Our opinion is that the disease is non-contagious, mostly induced by food-poisoning, although the cause of the disease is, we confess, rather obscure. The captain wishes to land the twenty-six sick men in Honolulu, hire a suitable house, beds, etc., to accommodate thirty people, and have the ship's doctor to attend upon them during the stay of the vessel in port, probably three or four weeks.

"We see no objection to the President of the Board of Health allowing such a course, without any restriction whatsoever, although under all probabilities some of the patients will die during their stay in port. We only mention this fact so that no foolish scare should take place; and it might be advisable, in case the men were allowed to land, to publish a statement of the above-mentioned facts.

"G. TROUSSEAU,

Port Physician.

"ARTHUR MOURITZ."

The patent-medicine men of the land, both of old and new schools, seem to be thriving, as numerous sign-boards at shop-doors and an increased number of advertising agents in the streets do testify. The idea of the "sandwich man" method of advertising, so popular in America and England, has not yet been thoroughly grasped by the patent-medicine proprietors of this land, as no near approach to it has yet been made. The ingenuity, however, displayed in this direction shows that they are very apt scholars, while the implicit faith placed in all kinds of medicine by the common people makes this method of obtaining a living, one would say, very remunerative.

The proprietor of one of the largest daily newspapers is said to have made a fortune by the sale of an eye-wash labelled "collyria" in English, with directions, etc., in Japanese, which wash consisted of a solution of zinc sulphate in water, a solution of course of value in some cases.

Foreign patent medicines are also popular, but their use is, of course, more limited, on account of their comparatively high cost.

Foreign pain-killers, various compound syrups of hypophosphites, anti-sea-sick remedies, and the like, are much used, while native imitations are not wanting. A wise government has, as in the case of native proprietary medicines, required a chemical analysis to be made of all foreign medicines of this character imported and offered for sale, a step which has resulted in the refusal to admit for sale one at least of our most popular nostrums.

Drugs, medicines, and chemicals are still imported into the country in large quantities, the total amount of which would seem, however, a falling off as compared with previous years, to be accounted for in a great measure by the fact that although larger quantities of remedies found in our Pharmacopœias are annually prescribed, yet the botanical resources of the country and the increased facilities for the manufacture of medical preparations are such as to permit of their being prepared at home.

The British consul at Yokohama, in his summary of trade for last year, just published, gives as the total import value of drugs, medicines, and chemicals, the sum of (Mexican) \$394,624, to which amount quinine contributed \$40,301, and santaline nearly \$25,000, equal to 90,000 ounces. It is further stated that 34,000 pounds of bromide of potassium were imported. The importation of morphia amounted to about 6000 ounces.

The rapidly-increasing employment of Western remedies, together with the increased popularity of our methods of treatment based upon really scientific investigation into the causes of disease, contrasts very favorably with the slow and painfully conservative action of the native physicians of China.

CHICAGO.

THE fifth annual report of the Illinois State Board of Health, which is to appear shortly, will contain the following interesting matter relating to medical education and the practice of medicine. In June, 1880, the Board appointed a committee to formulate a schedule of educational requirements and characteristics by which the good standing of medical schools might be determined. This step was found necessary in order to enable the Board to better discharge the duty required of it by the Act to Regulate the Practice of Medicine in the State of Illinois, by which act the Board is directed to issue certificates to all who furnish satisfactory proof of having received diplomas or licenses from legally-chartered medical colleges in good standing. A schedule was prepared by the committee, and subsequently adopted by the Board as the standard entitling to recognition as the basis for legal qualification for practice in Illinois. Previous to that time a very small minority of the medical colleges of the country demanded

evidence of a good English education as a preliminary to the commencement of medical studies. The Illinois Board exacted these conditions: the several minor branches of mathematics, English composition, elementary physics, and natural philosophy, to be followed by actual attendance upon lectures. It further announced that, after this declaration, diplomas of colleges whose educational requirements and methods fell below the schedule would not be recognized as entitling their possessors to certificates from the Illinois State Board of Health. The conditions presented are especially important to students intending to practise in Illinois, as, unless their diplomas are from colleges in good standing, as thus defined, the only other method of entering practice in this State under the law would be by passing a satisfactory examination before the Board. The schedule of the Illinois Board has been adopted by the Missouri State Board of Health and the Minnesota State Board of Medical Examiners.

The report gives a full compilation of the medical laws of the various States and of Canada, together with a summary and analysis of colleges and students. The total number of colleges given is two hundred and eighteen, of which two hundred and four are in the United States. Diplomas have been presented to the Illinois State Board from one hundred and nine colleges, all but six of them being in the United States. Heretofore eighty-five of these have been recognized, sixteen rejected, and nine have been recognized conditionally. There were previously only forty-five which exacted a preliminary examination as a condition for matriculation, while at the present time there are eighty-two; and of those requiring an attendance on three or more courses of lectures before graduation, the number has been increased from twenty-two to twenty-seven. A total of fifty-three require a thesis as a condition of graduation, sixty-four have chairs of hygiene, and seventy-two have chairs of forensic medicine. There are seven colleges exclusively for women, the United States having five and Canada two. There were 12,502 matriculants for the session of 1882-83, classified as follows: regular, 10,402; homœopathic, 1204; eclectic, 824; and physio-medical, 62. The graduates numbered 4143. There are twenty-eight different institutions not recognized by the Illinois Board.

CHICAGO, November 5, 1883.

NOVEL CAUSE OF TINNITUS AURIUM.—An exchange mentions an instance of a gentleman who was much annoyed by crackling noises in his ears at night, which kept him from sleeping. An old lady suggested that there might be maggots in the feather pillow, which was found to be a correct diagnosis. Better in the pillow than in the head!

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a meeting of the Society held October 17, 1883, the President, Dr. W. M. Welch, in the chair, Dr. Arthur Van Harlingen read a paper on

THE TREATMENT OF PSORIASIS.

Psoriasis is one of the commoner skin diseases met with in this country. The statistics of the American Dermatological Association show that it occurs in the proportion of about six per cent. in all diseases of the skin encountered. Daily experience would seem to indicate a still more frequent occurrence, because the affection is a disfiguring and annoying one, and therefore patients are more inclined to seek relief, and also because it is a stubborn disease and greatly prone to relapse. The history of a single case will often extend over many years and bring it under the observation of a number of different physicians.

It is because of the comparative frequency with which psoriasis is met and its stubbornness to treatment, that I have selected it as the subject of my remarks this evening. Having had a good deal of experience in the treatment of the commoner forms of the disease, it is my intention to confine myself chiefly to the consideration of such remedies as have come under my own observation and use, only touching incidentally on others.

The object of treatment in psoriasis is the removal of the eruption as it exists upon the skin. We cannot hope with any degree of certainty in any given case to prevent a recurrence of the disease, or, if you please, a relapse. For the drug has not yet been discovered which will surely take away all tendency to the recurrence of psoriasis, and whoever promises a cure, in the wider sense of the word, to his patient, will, in a very great number of cases, find that he has been too sanguine. Fortunately, however, a certain number of patients do seem to recover. I do not know what has been the experience of others in this respect, but I have patients who have been under observation three, five, even eight and ten years without relapse. Such cases are, unfortunately, few.

Pre-eminent among the internal remedies which are useful in the treatment of psoriasis is arsenic, which may be justly called a specific in this disease. I think I am not asserting too much when I say that eight out of ten cases of psoriasis of average character and severity shall do better under the use of arsenic than with any other remedy. I prefer Fowler's solution given in the average dose of four minims thrice daily. I think this solution is often prescribed in too large doses, and I am sure the dose of five to ten minims, as given in the books, is too large for ordinary

use. Most patients bear a four-minim dose very well, but there are idiosyncrasies. I have sometimes been obliged to limit the dose at the beginning to one minim in cases where subsequently such toleration has been established that twelve minims have been taken with impunity. However, four minims is a good dose to begin with, and if the effect does not begin to show itself within ten days or two weeks, the amount may be gradually increased. Fowler's solution should never be given to the patient in a vial with directions to drop out the requisite number of drops. The patient is apt to make a mistake, vials of different sizes may pour out more or less in each drop, and there is always danger in leaving a half-empty vial of poison about the house. The solution is better given mixed with water, or with wine of iron or other convenient vehicle.

The effect produced by arsenic upon the eruption of psoriasis is, first, in diminishing the quantity of epidermic scales thrown off, and then in preventing the appearance of new lesions. The patches gradually lose their scalliness, begin to heal in the middle, and disappear little by little. It must be remembered, however, that arsenic is a slowly-acting remedy, and its use should be continued through many months to get the best security against relapse.

The other liquid preparations of arsenic used in psoriasis are Pearson's solution of the arseniate of sodium, and Donovan's solution of the iodide of mercury and arsenic. I have used the former in a few cases without noticing any perceptible difference as regards efficiency between it and Fowler's solution. The solution of mercury and arsenic (Donovan's) I have employed in certain stubborn cases with good effect where Fowler's solution has seemed to fail. The existence of syphilis as the cause of the eruption in these cases having been excluded, I am at a loss to account for the apparently greater efficacy of the mixed treatment. The dose given was as much as ten drops, and although this solution is weaker in arsenic than Fowler's, yet I am inclined to the opinion that the conjoint administration of the two drugs, mercury and arsenic, was the cause of the good result, rather than the increased dose. I should be inclined to use Donovan's solution in cases where Fowler's solution shall have failed.

The mixture of arsenious acid, black pepper, and sugar of milk, known as Asiatic powder, and recently placed in the Pharmacopœia, with the pepper left out, among the triturations, is of no particular value above the other preparations, and is not so convenient of administration.

Hypodermic injections of solutions of arsenic have been employed, but I have had no experience in their use.

Next in value to arsenic in the treatment of psoriasis is iron. I commonly employ the

tincture of iron in cases where arsenic does not seem indicated. There is one type of psoriasis which includes robust, rosy, well-nourished individuals, "the very picture of health." Such people have never been sick a day in their lives, or perhaps may have had slight attacks of articular rheumatism. Such patients do well under arsenic.

But there is another type in which the individual is thin, poorly nourished, and perhaps somewhat anæmic. These are the cases which do well under iron, which is best administered in the form of the tincture of the chloride. With these two remedies, arsenic and iron, I usually succeed in curing ordinary cases of psoriasis, adding in rare cases cod-liver oil to the use of the tincture of iron when debility is present. Of course local applications are employed at the same time. Of these I shall speak presently.

In addition to the internal remedies mentioned, quite a host of others have been employed from time to time. Such are tar, carbolic acid, copaiba, phosphorus, tincture of cantharides, tincture of maize, carbonate of ammonia, acetate of potassium, and other diuretics; the alkalies, as liquor potassa and the alkaline mineral waters. Of these I have found alkalies and diuretics useful in cases where a markedly inflammatory condition of the skin has existed. The other remedies I have not employed, nor do I think the reports of their usefulness based on a sufficient number of facts, except in the case of tar possibly, to make it worth while to try them.

Equally important with the internal treatment of psoriasis is the external management of the disease. It is, of course, desirable to remove the eruption as soon as possible wherever it may be situated; but when it is found upon the face there is every reason to attempt its cure by all means and in the shortest time. External and internal treatment should therefore be combined when practicable. The first thing to do is to remove the scales. This may be done by means of local or general baths, wet dressings, etc., or by inunctions with fats and oils, by the use of soap, or by the action of impermeable dressings of india-rubber or oil silk. When only a few lesions are to be acted upon, a solution of salicylic acid in alcohol, 1 part to 16, well rubbed in with a sponge, will remove the scales very nicely.

The scales having been removed, the next thing is to apply such substances to the diseased patches as may most quickly modify the abnormal condition of the skin and bring it back again to a healthy condition.

An innumerable number of applications have been recommended for this purpose, the most of which I shall pass over with only a mention. Such have been soaps and alkalies, citric and hydrochloric acids, sulphur, iodine, and mercury, alone and in combination, together with the various forms and preparations of tar, creasote, and carbolic acid.

All of these remedies have their uses, and most of them, especially the tarry preparations, I have employed time and again in years gone by, and with moderate satisfaction. The introduction, however, of chrysarobin or chrysophanic acid, some six or seven years ago, put quite a new face on the local treatment of psoriasis; and since then, with the aid of this and other later discoveries, we are able to work a much more rapid change in the appearance and condition of the skin in this disease.

As chrysarobin is perfectly well known to all here present, both as to its advantages and as to its defects, I shall say but little about it in the ordinary form of its application, namely, as an ointment. When it first came out I tried it quite extensively, but its disadvantages seemed so great that I had already begun to restrict its use greatly in my practice, when a new agent appeared, which for every-day use has in my hands, until very recently, almost entirely superseded all other local applications. I refer to pyrogallallic acid.

I do not think pyrogallallic acid is by any means so well known as an application for the relief of psoriasis as is chrysarobin. If I may judge by the infrequency with which its virtues are mentioned in the journals (although I believe all recent text-books speak of it), it is not in general use. But it is, in my opinion, one of the very best remedies we have for the cure of cases of psoriasis of average severity. Employed in the form of ointment, of the strength of one-half to one drachm of the pyrogallallic acid to one ounce of simple ointment, the effect produced by it is almost as rapid and decided as that brought about by chrysarobin, without the accompanying discoloration. A slight blackish staining is all that is produced, and the ointment can even be employed in the scalp without markedly discoloring the hair, if applied cautiously. It is desirable, however, not to apply soap or alkalies at the same time, because this causes a more permanent and deeper stain.

Pyrogallallic acid cannot be used in extensively generalized psoriasis, when large surfaces are affected by the disease, without a certain amount of danger from absorption, as indicated by strangury and olive-green or tar-colored urinary secretions. With care, however, and the occasional suspension of the remedy for short periods, I believe this remedy could be employed even in universal psoriasis with good effect.

One more external application in psoriasis remains to be spoken of,—namely, naphthol. This drug, a derivative of coal-tar, was introduced into use several years ago by Kaposi, of Vienna, as a sort of substitute for carbolic acid. He recommends it very highly in psoriasis, in the form of ointment, about eighty grains to the ounce, and I have used it in this

and other strengths, and also in solutions in alcohol and oil, with fairly good effect.*

Naphthol is not so active in its effect as chrysarobin or pyrogallallic acid, but it is much more agreeable, and is, I think, peculiarly well adapted for employment upon such parts as are exposed to the view, as the face and hands. Like pyrogallallic acid, it must be used with caution over large surfaces, as absorption with toxic effects may be produced.

It remains to mention briefly two or three methods of application of these remedies which have recently been brought forward. The first of these is the treatment by medicated gelatin, which was introduced by Professor Pick, the well-known dermatologist of Prague. My attention was first drawn to this by a pamphlet which Professor Pick kindly sent me, in which he gave an account of his earlier experiments with medicated gelatins, but I have not as yet had an opportunity of testing this method of medication as I should desire. I may say, however, that the method does not seem to me calculated to prove convenient and popular in private practice. I had for some time been making some experiments in my service at the Polyclinic in the preparation of gelatins impregnated with chrysarobin and pyrogallallic acid, but without much satisfaction, when Dr. Charles L. Mitchell, the well-known pharmacist of this city, sent me some excellent preparations of his own, which seem to be perfectly adapted to the purpose for which they are intended. A bit of one of these gelatin sticks is cut off and placed in a water-bath, where it soon melts into a clear homogeneous fluid, which may then be applied to the lesions of the skin by means of a paint-brush. The advantages claimed are cleanliness and transparency. The coating of gelatin does not rub off on the clothes, and is therefore not so dirty as an unctuous application. A fresh coating can be painted on every day or two as the old layer wears off. The chief disadvantage of this method of treatment is that it requires apparatus which is not convenient to carry about, nor can the patient be trusted to employ it at his discretion. My own experience is that in psoriasis, at least, the gelatin applications are not active enough. I have not, however, used them with sufficient frequency to pronounce a positive opinion.

Recently a solution of chrysarobin in collodion has been recommended in the treatment of psoriasis by Dr. George H. Fox, of New York, and several dermatologists have confirmed his statements with regard to its efficacy. I have employed this preparation in one or two instances, but it has seemed to

* In a communication read before the American Dermatological Association last month, and published in the *American Journal of the Medical Sciences* for October, I have given the results of my experience in the use of naphthol in various diseases of the skin, psoriasis among the number. I may refer to that paper for further details as to the action of the drug in this disease.

me so much less active than the chrysarobin ointment that I have not been encouraged to continue its use. It has one great advantage over the gelatin applications, however, and that is that it can be applied extemporaneously and without the paraphernalia which must accompany the use of the gelatin.

A few weeks since, a pamphlet by Prof. Auspitz, of Vienna, reached me, in which that distinguished dermatologist recommended liquor gutta-perchæ as a vehicle for the application of chrysarobin. I at once obtained a ten per cent. solution, or rather emulsion, of chrysarobin in liquor gutta-perchæ, and, happening to have a case of psoriasis of the face and scalp under treatment, I gave some to the patient to apply once daily. The effect was so happy as to encourage me very much to hope that we have in this preparation the most convenient method of applying chrysarobin yet devised; and as chrysarobin is, after all, the most efficient local agent in the treatment of psoriasis as yet brought forward, I have no hesitation in urging the trial of this preparation on any one who may have a case of psoriasis under treatment. It is to be noted, however, that the same watch must be kept upon the skin for fear of exciting dermatitis as when the ointment is used. Only, when the liquor gutta-perchæ dries, which it does very quickly, there is little or no danger of rubbing the chrysarobin over the good skin, nor is there much danger, if any, of staining the clothing.

Dr. James C. Wilson read a paper entitled

NOTE ON HYDRARGYRUM FORMAMIDATUM.

Some accounts of this preparation have appeared in recent journals. Towards the close of last year, Prof. Liebreich proposed, in a meeting of the Berlin Medical Society, a new drug for the treatment of syphilis by the hypodermic method. Chemically this drug belongs to the amide group. Liebreich was led to use it from the fact that the ordinary amides of the body, of which urea is the principal one, are eliminated in an undecomposed state. When, however, the amide is in combination with a metal, decomposition occurs, and the metal is reduced and deposited. Liebreich found, by actual experiment, that this statement is true of mercury. It is supposed that the formamidated mercury, after hypodermic injection, undergoes decomposition, and that the metal mercury is set free in the tissues. The preparation is soluble in water, of neutral reaction, does not coagulate albumen, is not precipitated by caustic soda, and the presence of mercury can be demonstrated by potassium sulphide. It produces its effects very surely and rapidly. Liebreich regards it as the best remedy known for the hypodermic treatment of syphilis by mercury, as it is but little liable to excite local troubles or salivation. Later (*Medical Times and Gazette*, July 7, 1883) we find that Prof. Zeis-

sel, in Vienna, after trial of this remedy in fifteen cases of syphilis, was well satisfied with the results. In three of these cases salivation was produced. Some pain followed its injection, which was not, however, so severe as that following the hypodermic use of mercuric chloride. Twenty injections was the maximum number required to disperse the manifestations even in severe cases.

Dr. Schacht, of Berlin (*New Remedies*, September, 1883), writes as follows:

"Formamide is a colorless liquid, boiling at about 195° C., which can be distilled without decomposition only in vacuo. It is prepared by acting upon formate of ethyl by ammonia. When pure it is neutral, but easily becomes acid.

"If a *concentrated* solution of formamide be *boiled* with precipitated mercuric oxide, decomposition ensues, and metallic mercury is separated.

"On the other hand, if a *dilute* solution of formamide be *warmed* on the water-bath with precipitated mercuric oxide, a clear colorless solution results, in which soda (hydrate of sodium) produces *no* precipitate. Sulphide of ammonium, however, precipitates the mercury as sulphide, both from the formamide of mercury and from mercuric chloride. Solution of albumen is precipitated by the latter salt, but *not* by the formamide.

"Formamide of mercury is prepared in the following manner: ten to thirteen grammes of freshly precipitated, completely washed, and still moist mercuric oxide are gently warmed with a little water in a porcelain capsule, with gradual addition of ten grammes of formamide. As soon as solution has taken place, the resulting colorless liquid is filtered into a litre-flask, and the latter filled to the litre-mark with distilled water. Each cubic centimetre contains 0.01 gramme of mercury, which is the quantity representing *one* hypodermic dose. Formamide of mercury keeps well in brown-colored bottles, and should also be dispensed in these."

In a note from Vienna (*Medical News*, October 13, 1883), it is stated that Prof. Neumann is now trying hydrargyrum formamidatum on a large scale as an anti-syphilitic. It is used hypodermically in doses of one cubic centimetre. It acts with far greater efficacy upon the recent efflorescences than upon the later manifestations. Pain of great severity and active local inflammatory troubles have resulted in Neumann's cases.

The preparation which I exhibit, made by Merck, of Darmstadt, is a one per cent. aqueous solution, and the dose of it is from one-half to one ordinary hypodermic syringe-ful.

It has not been possible to obtain this drug in this city until the present time. I would be glad to place the specimen which is exhibited in the hands of any member of the Society who may desire to make a trial of it chemically.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT the semi-annual meeting of the Pathological Society of Philadelphia, held at the hall of the College of Physicians, Thursday evening, October 25, 1883, the President, Dr. Tyson, in the chair, Dr. Seiler read a paper on

THE PATHOLOGY OF PHTHISIS AND ITS LARYNGEAL COMPLICATIONS.

In this communication he gave his views regarding the pathology of tuberculosis and of phthisis and of the laryngeal complications of the two diseases. He defined tuberculosis as an auto-infectious disease, manifesting itself primarily by the production of minute neoplasms called miliary tubercles, which rapidly undergo retrograde metamorphosis, ending in caseation, leading directly to the dissemination of infectious material throughout the lymph-channels. This infectious material consists in cheesy matter due to scrofulous inflammation, which may remain encapsulated for a long period. He then described the histological characteristics of tubercles, and showed how they could produce consolidation of the lung-tissue by exciting secondary inflammation.

The lecturer then took up the consideration of the disease known as phthisis, and gave the following definition of it: "Phthisis is a progressive consolidation of the lung-tissue, due to a more or less localized inflammation, affecting primarily the apices, and undergoing retrograde metamorphosis; it is an inflammatory disease." He then gave a description of the pathological appearances as they are observed in the lung-tissue during the progress of the disease, and gave it as his opinion that the different forms and stages of phthisis, as they are described by many authors, are merely differences in the intensity and extent of the ulcerative process. As etiological factors he mentioned the various causes which produce a lowering of the vitality of the general system, thereby producing a predisposition on the part of the respiratory organs to chronic inflammation: among others he names heredity, peripheral nerve irritation, hypertrophic nasal catarrh, insufficient aëration of the blood, etc. An elevation of the vitality of the system at large would prevent an outbreak of the disease, or lead to recovery in cases where not too much lung-tissue had been destroyed. This elevation was to be produced by proper feeding and healthful exercise in the fresh air more than by the exhibition of drugs. On the other hand, tuberculosis is always fatal, and treatment was of no avail; but a great deal could be done to prevent the initial formation of the cheesy deposit by elevating the system of scrofulous patients early in life, thus preventing the outbreak of tuberculosis later.

The laryngeal complications of both dis-

eases were then considered in detail, and their differences pointed out. According to the lecturer, the laryngeal lesions never appear prior to the lung-disease in phthisis; they are characterized by a peculiar pallor of the mucous membrane, the tumefaction generally affects the posterior portions of the organ, and the ulcerations are shallow and have a tendency to spread on the surface. Tubercles, or cheesy deposits, are never found in the tissues of the larynx in uncomplicated phthisis. In tuberculosis, on the other hand, tubercular deposits have been found in the larynx prior to the lung-complication, the mucous membrane is of a lurid-red color, the tumefactions are more commonly observed in the anterior portions of the larynx, and the ulcerations are deeper, with raised edges, and often extensive destruction of tissue.

The paper closed with the remark that the indiscriminate use of the terms phthisis and tuberculosis, when speaking of lung-disease, in our literature, was calculated to mislead the student, and to make careful investigation into the pathology and etiology of these diseases extremely difficult, if not impossible.

Dr. J. C. WILSON, being called upon by the President, said that he had listened with interest to the reading of the paper. The field covered by the writer is too great to permit the points to be discussed in detail. Two points, however, appeared to warrant comment. First, Dr. Seiler had several times used the expression "tuberculous material not derived from the exterior." If he had understood the paper aright, Dr. Seiler had not indicated his views as to the nature and source of this "tuberculous material." Does he follow the older doctrine, that of Bayle? or has he some new opinion as to the etiology of tubercle? Secondly, Dr. Seiler failed to make clear his means of recognizing tubercle either clinically or in the laboratory. It would be of interest to know the writer's views upon this vexed question. In a recent work, Hamilton, of Aberdeen, again seeks to establish a histological criterion for tubercle,—the presence of giant cells under a peculiar arrangement. This pathologist points out two modes of degeneration for tubercle: 1, caseous; 2, fibroid. To the latter Dr. Seiler makes no allusion.

He thought, further, that the author of the paper had scarcely emphasized with sufficient force the presence of tubercle among the lesions in the various forms of phthisis, as seen in post-mortem examinations.

He heartily concurred in the hopeful views as to the curability of certain forms of chronic lung-disease when treatment is instituted at an early period. Nothing has exerted a more unfavorable influence upon the therapeutics of such diseases than the false view that the constitutional tuberculous diathesis invariably antedates the local lesions of pulmonary consumption.

Dr. F. P. HENRY remarked that Dr. Seiler's paper was so comprehensive that he found it impossible to refer to more than a few of the points contained in it. He was not inclined to draw so broad a line of distinction between that form of pulmonary disease in which milary nodules predominate and that in which the deposit is in larger caseous masses. Like Dr. Seiler, he was by no means convinced of the primary importance of the bacillus as a cause of tuberculosis, but was inclined, however, to attribute to it a prominent part in the production of the secondary symptoms of phthisis, those of systemic infection, which are largely septic in character. The symptoms of interference with oxidation caused by even extensive destruction of pulmonary tissue are subordinate to those of systemic infection caused by the absorption of the contents of cavities. The presence of the bacillus in the contents of these cavities is indispensable to the production of changes capable of producing this systemic infection. A small ulcerating cavity communicating with the absorbent vessels is more disastrous in its effects than a larger cavity shut out from the absorbents by a lining membrane or wall of fibroid tissue. He understood Dr. Seiler to deny the existence of the giant cell, and to make the statement that cross-sections of blood- and lymph-vessels have been mistaken for it. Dr. Henry did not agree with him in this view, but thought that the irregular contour of the giant cell and its granular protoplasm were sufficiently characteristic. Additional evidence of the existence of this cell was furnished by the experiment of introducing beneath the skin of an animal two thin glass covers, fastened together. In the interspace of the glasses giant cells have been found, and in such an experiment there can be no question of the cross-section of vessels. Dr. Seiler had several times referred to what is known in this city, and elsewhere, as Formad's theory of tuberculosis, which is that in certain animals predisposed to phthisis, and presumably in some human beings, the lymph-spaces are abnormally small, or, in other words, that in a given area of tissue there is to be found a greater number of endothelial cells than in non-strumous animals. Dr. Henry did not think this theory should be so extensively quoted until some more serious attempt had been made to establish or refute it. This might, he thought, be readily done by counting the cells in a given area of the tissue of strumous animals and comparing their number with that contained in the same area of tissue of non-strumous animals. He did not think any greater difficulty would be met with in this attempt than has been successfully encountered in the enumeration of the blood-cells.

Dr. BRUEN said that he believed in a hopeful prognosis in the early stages of many varieties of phthisis; even when the process

of phthisis is advanced, the management of cases is more successful when the lesions are localized; less advanced lesions are more grave when the lesions are widely disseminated. Dr. Bruen thought that it had been proved that phthisis could be produced by inhalation of inorganic irritating particles, especially if there was inherited predisposition to phthisis or an artificially-damaged constitution. May not bacterial elements be among the irritants capable of developing phthisis when inspired in large numbers? and he thought they might be even more capable of creating damage than inorganic materials, because they possessed the power of proliferation. Dr. Bruen agreed with Dr. Seiler in his views in the main, and considered his paper most instructive and interesting.

Dr. MILLS thought it worth while to note the frequent occurrence of tuberculosis among those afflicted with chronic nervous and mental diseases. At the institutions for the feeble-minded and insane, phthisis or tuberculosis is a common cause of death. This fact, he thought, would lend support to the views of Formad rather than to those of Koch.

Dr. J. T. ESKRIDGE had observed that some who had participated in the discussion referred to the views of the pathology of tuberculosis expressed in the paper of the evening and to those entertained by Dr. Formad in order to prove the same thing. He regarded the theories of each of these men as widely different. If tuberculosis is the result of inflammation in a person whose lymph-channels are abnormally narrow, as claimed by the latter, he could not see that phthisis differed from tuberculosis, as maintained by the former. In regard to tuberculosis being frequently developed in chronic diseases of the brain and cord throwing light on the pathology of the former, he thought the association of these diseases proved nothing more than that a prolonged period of lowered functions of the body was a favorable condition for the development of tuberculosis. He confessed that he did not know what to believe with reference to the pathology of tuberculosis; enough, to his mind, had not been proved to establish firmly any theory yet advanced so that it might be accepted as positive fact. Dr. Eskridge agreed with Dr. Shakespeare in demanding more pathological investigation, following the clinical observation of the disease, before he could accept any view as positive of the pathology of tuberculosis. Dr. Eskridge called attention to the fact that many of the best clinical observers of large experience, such as Flint, Da Costa, and Hughes Bennett, considered tuberculosis and phthisis to be identical.

Dr. DAVIS asked Dr. Seiler if he taught that tubercle was caused by a caseous focus. He was answered, Yes. He continued: It is important to know whether this is the case or not, as the German surgeons excise caseous

glands, not so much for the deformity they produce as to obviate the liability to general infection. Would Dr. Seiler sanction this practice? As regards the possibility of cure, he believed, with Koster, Billroth, and Koenig, that tubercle is a local affection, and not a general disease. He had seen as marked tuberculosis in the knee as in the lung, the miliary tubercles being within an eighth or a quarter of an inch of each other. He has also seen tumor albus of the knee recover without operation. If the tuberculosis can get well in the knee, he believed that it can in some cases get well in the lung also.

Dr. SEILER, after thanking the Society for the interest shown in his paper, said that, as most of the questions submitted to him had been already answered in his communication, he would not reply in detail, owing to the lateness of the hour.

A vote of thanks was passed by the Society to Dr. Seiler for his interesting communication.

A social meeting was held after the close of the business of the evening.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting of the Academy was held, November 1, 1883, Fordyce Barker, M.D., LL.D., President, in the chair.

Dr. T. H. BURCHARD read a biographical sketch of the late Dr. Frederick D. Lente, of Cold Springs, New York. He was born in North Carolina in 1823, took the degree of A.M. from the University of North Carolina, graduated from the medical department of the University of the City of New York in 1849, and had since practised medicine in New York, at Cold Springs, Saratoga, and in Florida, the state of his health necessitating from time to time a change of locality. He once held a professorship in the University of the City of New York. Dr. Burchard described his lamented friend as conscientious, unpretentious, gentle, an earnest student, of active mind, thorough and accurate as a diagnostician, and self-sacrificing in his devotion to the interests of his patients. He died of cerebro-spinal meningitis.

ON THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING, WITH PRESENTATION OF A NEW AND SIMPLIFIED EVACUATOR.

Dr. FESSENDEN NOTT OTIS read a paper with this title. Dr. Otis reviewed the subject of evacuation of the bladder after crushing of stone at some length, referring to early instruments invented by Sir Philip Crampton, Clover, and others, and quoting from the writings of Dr. Bigelow, of Boston, whose later and more-perfected instrument was the one which he, Dr. Otis, had used with entire satisfaction until recently, when he had the

pleasure of constructing one more simple in its make-up, more easily portable, less expensive, and free from certain imperfections which had been referred to that of Dr. Bigelow. The principal objection to the earlier inventions related perhaps less to the evacuator itself than to the size of the tube employed: it was then taught that the normal size of the urethra was equal only to twenty-one millimetres in circumference. It was now recognized that the larger the tube employed, consistent with the size of the urethra, the more readily would evacuation be effected. Dr. Otis referred to his published writings, going to prove that the normal male urethra varied in size from that of thirty-two millimetres to forty and more in circumference, and that the size of the canal bore a certain ratio to the circumference of the penis. In the numerous measurements which he had made, he had never found a single case in which the normal male urethra fell below twenty-eight millimetres, and he never hesitated on finding a constriction below this degree to look upon it as abnormal, and before proceeding to perform lithopaxy to enlarge the canal by division or by dilatation, as the case might demand. It was specially important that a narrow meatus should be divided, rather than allow one's self to be led to the use of a small-sized evacuating tube with its accompanying disadvantages. The wounds produced by division or division should be allowed to heal before proceeding with the principal operation. The difference in the working value of the large- and small-sized tube was illustrated in two experiments, in which, other things being exactly equal, a tube thirty millimetres in circumference transferred three hundred grains of crushed coral in thirty seconds, while one of twenty-seven millimetres transferred only two hundred and eighty grains in the same time. In the case of the old man with enlarged prostate, it was safer to use a smaller tube, rather than run the risk of introducing one of larger size. Dr. Otis traced the successive steps in inventions by Dr. Bigelow, Sir William Thompson, and others, in attempts to construct an instrument by which rapid evacuation could be effected, which would avoid introduction of air into the bladder and return of fragments of stone during the operation; which, in short, would permit of the most rapid evacuation with the best possible results.

The instrument which Dr. Otis then presented consisted of a hollow glass globe; about two inches in diameter, into one side of which, and projecting upward, was a metallic tube connected outwardly with a rubber air-cavity; into the other side, and projecting downward, was another metallic tube, connected with the tube entering the bladder. The receptacle for the particles of stone consisted of a small glass vessel attached to the globe below. The globe being filled with water, either by suction force through the tube, or by pouring in at the

connection with the receiver, the pressure upon the rubber air-bag forced the fluid into the bladder, which returned with fragments of stone when the bag was again allowed to expand. The relation of the two metallic tubes in the globe, one opening upward, and the other, carrying the stone, downward, prevented any return of fragments, or, indeed, any agitation of the fluid in the receiver below. The amount of water in the bladder could be augmented, if desired, by turning the globe over and pouring in at the connection with the fragment-receiver. The globe could be protected by a light framework with some additional cost. The instrument worked with great satisfaction, was easily portable, cost but half as much as that of Bigelow, was free from certain objections which had been offered to the latter, and the operator was enabled to see the progress being made through the glass globe and receiver. He also employed a tube a little more curved at the end than that used by Bigelow, by which it was rendered easier of introduction and was less liable to become clogged with mucus.

Dr. E. L. KEYES opened the discussion, saying that he had only seen Dr. Otis's instrument for the first time to-day, had not had an opportunity to employ it, and was therefore unable to speak with regard to its practical working; it certainly, however, appeared very simple, and promised to be of the greatest service. It attested the great ingenuity displayed by the inventor on previous occasions. He had used Bigelow's improved apparatus, and had found that it worked very satisfactorily indeed; the objection which had been raised to it, that the screen was liable to become clogged with mucus, had not held true in his experience. Dr. Otis had referred to the history of tolerance of the bladder to surgical manipulation, in which it was stated that it had been established before Dr. Bigelow dwelt upon the fact; Dr. Keyes said that this tolerance was well known to the first inventors of vesical evacuators. He also stated that the inventions of Clover, and others about his time, illustrated in the diagrams by Dr. Otis, were not intended for use upon the healthy viscus, but in its diseased state. Concerning the normal calibre of the male urethra, he did not think it best to form a high and fixed ideal on this subject, and insist upon dividing or dilating every urethra which did not conform to that standard. In general, the larger the tube employed for evacuation, the more easily would the fragments be removed, but he believed that we should not seek to introduce too large a tube, lest damage be done to the urethra; this was specially the case in the aged with enlarged prostate. He mentioned a case in which he had operated, using a smaller-sized tube with safety, and the patient was afterwards operated upon by another physician, who introduced a tube of large size with sad results. He believed that the ma-

jority of surgeons employed a tube of smaller size than that recommended by Dr. Otis, not but what the larger size in itself possessed certain advantages, but because they feared, possibly without reason, doing damage to the urethra. The success of the operation for evacuation depended upon a happy combination of the several points involved in the instrument used and of the steps of procedure, rather than upon the use of a tube of a particular size, or other single fact or detail.

Dr. OTIS closed the discussion by correcting certain theoretical objections to the instrument which had been raised by Dr. Keyes.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, M.D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia, etc. Fifth Edition, revised and enlarged. New York, D. Appleton & Co., 1884. 8vo, pp. 738.

Professor Bartholow has special talent for condensation, combined with a comprehensive knowledge of his subject, and a power of direct expression. That this combination is gratefully appreciated by the overworked American student and the no less overworked physician has been fully demonstrated by the remarkable demand for this work on therapeutics, which has now attained its fifth edition in less than seven years. On account of its convenience for reference and completeness, it has been adopted as a text-book in many of our medical colleges. The principal features of this treatise are now so well known that they need not be here specified: it is only necessary to quote from the preface that the present edition has been carefully corrected, and changed so as to correspond with the last revision of the United States Pharmacopœia, and that the opportunity has been embraced to incorporate some recent improvements in the science and art of therapeutics, which has somewhat increased the size of the work.

Among the sections considered worthy of special mention we might instance those on Electricity, Aliments, the shorter discussions of Massage, Air, Water, Hydrotherapy, and the various mineral springs of this country and Europe; while many of the newer remedies, convallaria, kairin, resorcin, curara, picrotoxin, muscarin, etc., receive ample consideration.

A few errors have apparently escaped the vigilant eye of the author. For instance, *tinctura aconiti radidis* (p. 597) should be *tinctura aconiti* according to the Pharmacopœia. *Chrysarobin* (U.S.P.), although officinal, does not appear in the work, nor can

Goa powder be found; chrysophanic acid is merely mentioned (on p. 639) as a constituent of rhubarb; its most important application in the treatment of psoriasis is not referred to. The author apparently considers carminatives of such slight importance that he has totally ignored such old-time friends as anise, cardamom, fennel, and ginger; and chamomile, both the English (*Anthemis*) and the German (*Matricaria*) variety, is also unaccountably missing; this is true likewise of musk, castoreum, cassia, juglans, tar, pitch, *sapo viridis*, wax, spermaceti, resin, and a number of officinal preparations which we think should appear in a text-book on *materia medica* (*i.e.*, *aqua ammoniæ fortior*, *chartæ potassii nitratis*, etc.). The very important fact of the great variation in strength between the French, German, and English makes of aconitine is not stated; a caution should here be given. An *aromatic* syrup of rhubarb should be included in the list as officinal under Rheum, in addition to the simple syrup (p. 639). For the sake of the student, it would have been proper to give the pharmacopœial definition in a few places where apparently without special reason it has been omitted (see Galla, p. 296; *Picrotoxinum*, 405; *Thymol*, 356; *Alum*, 292, etc.); and it would also have prevented mistake if the fact had been plainly indicated that these remedies are officinal. Among the non-officinal remedies worthy of being considered, but which we do not find, are pyrogallac acid, sodium ethylate, boroglyceride, jequirity, coto bark, and the new oleates of quinia, morphia, etc. The reference to sewer gas (p. 79) is liable to be misunderstood by the student, who might be led, from the context, to consider it as a definite chemical compound, or an elementary substance, which would be the reverse of truth, and the opposite, no doubt, of the author's views. He would, moreover, be inclined to entertain a doubt of the correctness of the statement (p. 77) that even the electric light could bring into the view of the otherwise unaided eye minute particles that are "extra-microscopic," including disease-germs; while the instructions given for making a flaxseed-poultice (p. 700) are scarcely such as would satisfy the requirements of the elder Professor Gross. The young practitioner, we fear, would hardly be able to justify himself before the coroner in case of an unfortunate result if he should follow the recommendation to give such large doses of *veratrum viride* as "3ss of the fluid extract every fifteen minutes, until nausea or vomiting ensues," even though pronounced invaluable in puerperal convulsions (p. 606). He would find it much safer to begin with a smaller quantity. (The proper dose is given on p. 602 as $\mathfrak{ij}$ ij-v.)

The instrument used by Dr. Mortimer Granville is not a "*percutier*" (p. 84), but a "*percuteur*" for applying massage to a nerve-

trunk in the treatment of neuralgia. As the Pharmacopœia uses the word "officinal" to designate the titles of those articles of medical use which are directed to be kept in the shops, we can scarcely regard the word "official" as used by Dr. Bartholow as its equivalent. Every direction or process authorized by the Committee on Revision must be considered as official, but the term "official" is the only correct one to apply to the approved *materia medica*.

We do not make these corrections in a carpentering spirit, but merely to aid the author in still further improving a most useful text-book both for students and practitioners. F. W.

GLEANINGS FROM EXCHANGES.

FORCIBLE DILATATION OF THE CARDIAC AND PYLORIC ORIFICES OF THE STOMACH.—The London *Lancet* of September 1, 1883, contains a brief report of two operations performed by Prof. Pietro Loreto for the relief of cardiac and pyloric stenosis by forcible dilatation, a full report of which by Dr. A. Albertini is to be found in the *Gazzetta degli Ospitali* of August 18. The operation upon the pylorus was performed by the fingers, and was the fourth one of this kind made by Professor Loreto. The patient—a woman, æt. 34—had suffered for three years from an affection of the stomach, accompanied by vomiting and nausea, and was so emaciated as to resemble a skeleton. The stenosis was diagnosed as inflammatory in character. The operation of opening the abdomen and stomach, dilating the orifice, and closing the wound occupied thirty minutes. Adhesions existed between the stomach and liver, intestines and omentum. Several arteries required ligation. The dressings were removed on the tenth day, and the wound was found healed. No constitutional disturbance followed the operation. The patient left the hospital at the end of a month perfectly cured.

On July 9, Professor Loreto performed an operation of forcible dilatation upon the cardiac orifice of a patient, a woman, who had suffered four years from symptoms of cardiac constriction. Continuous vomiting and incessant pain had produced extreme emaciation. In this operation a metallic dilator was employed to widen the contracted orifice. As in the first operation, the wound healed by first intention and without constitutional disturbance; vomiting ceased, and the patient regained flesh rapidly, increasing fourteen pounds in weight within six weeks.

The promptness with which union of the wounds occurred, and the entire absence of constitutional disturbance, invite attention. It is presumed that great care was exercised in surrounding the patient with the best hygienic

conditions, in the preliminary preparation of the patient, in the employment of antiseptic precautions, and in careful after-treatment. It would seem that successful results after such operations must depend upon all of these precautions.

According to the statement in the *Lancet*, Professor Loreto has operated in five cases. So far as we know, no report has been made of the condition of the patient first operated upon. It is quite manifest that great interest centres in the permanent character of the relief afforded by the operation, and with regard to this question time alone can decide. Another point of interest relates to the application of this operation to cases of malignant diseases, which, as a rule, involve the pyloric more frequently than the cardiac orifice. In certain cases where ulceration is absent, forcible dilatation might afford temporary relief, but an important question suggests itself, whether it would not be better surgery to perform, in all cases of malignant disease, the radical operation of resection of the organ, as has been successfully done. The operation of opening the stomach is too grave in character to be done as simply a palliative measure.

No details of the operative procedures are given in the first operation. In the second case it is stated that the incision in the abdominal wall was almost horizontal and just below the ensiform cartilage. The stomach was freely opened below the small curvature.

From the results in these two cases it would appear that the stomach does not resent operative interference of rather severe character, and that the procedure of forcible dilatation is sufficient to relieve a condition of stenosis which had given rise to very grave symptoms and conditions which foreshadowed fatal terminations. The question which remains to be solved is in regard to the permanent character of the relief afforded by the operation.

MISCELLANY.

INVESTIGATION INTO THE CAUSE OF THE YELLOW FEVER AT PENSACOLA.—By order of the Secretary of the Navy, a court of inquiry has investigated the circumstances connected with or which led to the recent outbreak of yellow fever at the United States Navy-Yard at Pensacola, Florida. After duly considering the facts, the court arrived at the following conclusions:

"First. 'As to the circumstances which led to the outbreak of the fever.'

"Having reviewed the evidence, we are now of opinion that the epidemic of yellow fever, now near its close, prevailing on the Naval Reserve, may be traceable to one or more of four origins,—viz.:

"1st. Possible infection from Pensacola by communication of persons, and by articles brought from that city.

"2d. Articles in Equipment and Steam-Engineering Storehouse possibly infected in former epidemics.

"3d. Possible infection of marine barracks since 1875.

"4th. Probable infection from the ballast used and handled at Fort McRae jetties by men who lived in and visited the villages of Warrington and Woolsey weekly and semi-weekly in their working clothes.

"Second. 'Whether or not proper measures were adopted to prevent the introduction of yellow fever into the navy-yard.'

"The first case of yellow fever having appeared in the marine barracks within the navy-yard previous to the death of the first case in Warrington, and not finally diagnosed and decided to be yellow fever until three days after attack, any precautions that could have been taken at that time to prevent the introduction of the disease into the navy-yard would have been unavailing, as the marine guard and the surgeon himself were already infected."

DAMAGES FOR ACCIDENTS DURING ANÆSTHESIA.—A suit brought against a dentist in New York City for negligence in allowing a piece of a tooth to drop into a patient's throat, which, after causing the patient to suffer with a cough, was expectorated at the end of a month, was recently decided against the defendant, who was obliged to pay five hundred dollars damages. The case was appealed, but the judgment was sustained. This recalls a case of a boy who died while under the influence of nitrous oxide gas, being suffocated by a molar tooth which slipped out of the forceps and became impacted in the larynx. In such cases, a dentist should be both competent and willing to perform tracheotomy, for the patient will generally die of suffocation before a surgeon can be summoned.

QUADRUPLETS.—*The Canadian Practitioner* contains an account of four living children at a birth, two boys and two girls, with but a single placenta. The mother was a small woman, weighing one hundred pounds, 38 years old, and had nothing unusual in three previous confinements. The father is 41 years of age, weighs one hundred and sixty-nine pounds, and is a strong, healthy, and robust man. He is reported as doing as well as could be expected.

A CONSISTENT NO-CODE ADVOCATE.—Dr. H. H. Kane, of New York, having taken to advertising and dealing in a nostrum for the treatment of the opium habit, has had his name dropped from the roll of members of the New York County Medical Society.

CORRECTIONS IN THE PHARMACOPŒIA.—A list of the changes and corrections made since the publication of the last edition of the *Pharmacopœia* can be had by enclosing a stamp to the publishers, Messrs. William Wood & Co., New York.

A MARTYR TO SCIENCE.—M. Thuillier, a scientist, and member of the French Cholera Commission sent to Egypt under the direction of M. Pasteur to investigate the cause or causes of the cholera prevailing there, has died from the disease contracted in the cholera hospital in Alexandria.

THE IOWA STATE MEDICAL REPORTER is the title of a monthly medical journal recently issued,—the only medical journal published in the State. It is ably edited, and its contents are interesting and largely original. Price, \$2 per year.

THE MEDICAL STUDENT is a new monthly journal issued in New York for circulation among medical students. It is well printed, and has an attractive appearance. The first number contains a letter from J. Milner Fothergill, of London.

OBITUARY.

DEATH OF DR. J. MARION SIMS, OF NEW YORK.

Dr. J. Marion Sims died of heart-disease at his home in New York City, November 13. He had retired, apparently in his usual health, the evening before. Early in the morning he conversed with his wife. Shortly after she observed that something was wrong, and immediately summoned his son. An examination showed that the doctor was dead. Dr. Sims was to have sailed for Europe on the 17th instant.

James Marion Sims, M.D., was born in Lancaster District, South Carolina, the 25th of January, 1813. In 1832 he was graduated from the South Carolina College at Columbia. He then studied medicine in Charleston, S.C., and at the Jefferson Medical College in this city, from which he was graduated in 1835. In 1836 he settled at Montgomery, Ala., and it was there he began to build up the reputation for daring and skilful surgery which has since extended throughout the civilized world. In 1845 he attracted attention to his new theory of the nature and origin of trismus nascentium, in regard to which he published a series of articles in the *American Journal of the Medical Sciences* three years later.

In 1845, also, he became especially interested in the subject of vesico-vaginal fistula. He supported a private hospital in Montgomery, Ala., for the treatment of this disease, at his own expense, and after four years was successful in his endeavors. He had introduced the use of sutures of silver wire, instead of the silken and other sutures formerly in general use, and he afterwards extended the employment of metallic sutures to all departments of general surgery. He also perfected all the mechanical appliances required for the successful treatment of vesico-vaginal fistula, and invented the famous "Sims speculum." His health failing in 1850, a change of climate was thought desirable, and in 1853 he removed from Alabama to New York City.

Being anxious to establish in the latter city a large hospital especially for the treatment of the diseases of women, he delivered an address for this object in May, 1854, before a meeting of the medical profession. He impressed his views on his hearers, and a Woman's Hospital Association was soon formed, under the management of many of the best-known ladies in the city. In 1861 Dr. Sims went to Europe, whither his fame as a surgeon had preceded him, and where he received great attention from members of his profession. He was invited to perform operations before Nelaton, Baron Larrey, Velpeau, and all the other prominent surgeons of Paris. In 1864 the French Government conferred upon him the order of Knight of the Legion of Honor. He accepted a special invitation from M. Deroubaix, the surgeon of the King of the Belgians, to visit Brussels and operate in the hospitals there, before the members of the Faculty. He created so marked an impression by the manifestations of his skill and the new ideas which he imparted that the Belgian professors immediately elected him a Corresponding Fellow of the Imperial Academy of Medicine, and also recommended his name to the Belgian Government for the order of Leopold I. The decoration was withheld at the time, but was conferred upon Dr. Sims during a visit to Europe a few years ago.

In 1870, after a hard struggle, he succeeded in organizing in Paris the Anglo-American Ambulance Corps, which did such efficient service. As a surgeon, the delicacy of his touch, the keenness of his perception, and the bent of his mind combined to make him especially fitted to treat the diseases of women. Throughout his life he kept enlarging the list of possible operations, so that his labors have rendered it possible for many women to benefit, with comparatively little risk, from operations which were formerly considered altogether impossible, or so hazardous as to be practically out of the question. His "Clinical Notes," published in 1866, is a standard work, and has been translated into French and German. On the 21st of December, 1836, he married Eliza Theresa, daughter of Dr. Bartlett Jones, of Lancaster, South Carolina. He leaves four daughters and two sons. One of his daughters is the wife of Dr. Thomas T. Pratt, formerly of Alabama, but now of Paris. His sons are Mr. W. Marion Sims, and Dr. H. Marion Sims, of New York City.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 27 TO NOVEMBER 10, 1883.

BACHE, DALLAS, MAJOR AND SURGEON.—Paragraph 1, S. O. 238, A. G. O., October 18, 1883, assigning him to duty at Willet's Point, New York, revoked. Paragraph 2, S. O. 252, A. G. O., November 3, 1883.

McKEE, JAMES C., MAJOR AND SURGEON.—Relieved from duty in the Department of California, and assigned to duty as Medical Director Department of the Columbia. Paragraph 5, S. O. 249, A. G. O., October 31, 1883.

PRICE, CURTIS E., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Custer, M. T. Paragraph 1, S. O. 187, Department of Dakota, October 25, 1883.

STERNBERG, GEORGE N., MAJOR AND SURGEON.—Leave of absence granted October 4, 1883, extended one month. Paragraph 4, S. O. 255, A. G. O., November 7, 1883.

VICKERY, R. S., MAJOR AND SURGEON.—Assigned to duty at Fort Townsend, W. T. Paragraph 3, S. O. 149, Department of the Columbia, October 29, 1883.

WOLVERTON, WILLIAM D., MAJOR AND SURGEON.—Granted leave of absence for one month. Paragraph 6, S. O. 201, Department of the East, October 24, 1883.

MERRILL, J. C., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 7, S. O. 201, Department of the East, October 24, 1883.

PATZKI, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for three months, on surgeon's certificate of disability. Paragraph 6, S. O. 254, A. G. O., November 6, 1883.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Townsend, W. T. Paragraph 2, S. O. 149, Department of the Columbia, October 29, 1883.

OWEN, W. O., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Stevens, Oregon. Paragraph 2, S. O. 148, Department of the Columbia, October 26, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM OCTOBER 27 TO NOVEMBER 3, 1883.

The orders of Medical Inspector A. C. GORGAS to the Naval Hospital, Mare Island, California, revoked, and to remain at Naval Hospital, Chelsea, Massachusetts.

Medical Inspector SOMERSET ROBINSON to the Naval Hospital, Mare Island, California.

Surgeon F. M. DEARBORNE to appear before the Retiring Board November 5.

Medical Director A. L. GIHON and Medical Inspector A. HUDSON to represent the Navy at the meeting of the American Public Health Association at Detroit, Michigan, November 13.

Assistant-Surgeon J. M. EDGAR from the receiving-ship "St. Louis," at League Island, Pennsylvania, to the receiving-ship "Wabash," at Boston, Massachusetts.

P. A. Surgeon A. A. AUSTIN to the receiving-ship "St. Louis," at League Island, Pennsylvania.

There were no changes during the week ending November 10.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, DECEMBER 1, 1883.

ORIGINAL LECTURES.

AN ADDRESS BEFORE THE MEDICO-LEGAL SOCIETY OF PHILADELPHIA.

BY JOHN J. REESE, M.D.,

Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania.

MR. PRESIDENT, AND GENTLEMEN OF THE MEDICO-LEGAL SOCIETY OF PHILADELPHIA,—I have been honored with an invitation to make you an address on this evening, which I understand is the opening of your annual session. It has afforded me much pleasure to accept this invitation, for two reasons: first, because it enables me to express to you my cordial sympathy in this movement on your part to inaugurate a Society whose object is to interest the two great professions of Medicine and Law in that most important, but hitherto much-neglected, science of *Legal Medicine*; and, secondly, because I thought that possibly I might be able to suggest to my medical brethren who are members of this Society, some few practical hints pertaining to the subject, which might prove useful in their future development of the science.

I may embrace the occasion to remark that it has seemed to many of us a matter of surprise, that in the city of Philadelphia, which may rightly be termed the mother of American medicine and the nurse of American medical schools, no attention whatever has been given to Medical Jurisprudence as a science, by either of the two professions of law or medicine, until within comparatively few years—very partially in Medicine only, but not at all in Law up to the present day.

I find, in looking over the literature of this subject, that the first public teacher of legal medicine in this country was Dr. James S. Stringham, of New York, who lectured upon it in Columbia College in the year 1804. In 1815, Dr. T. R. Beck was appointed Professor of Medical Jurisprudence in the Western Medical College; and, not long after, Dr. Walter Channing was elected to the chair of Midwifery and Medical Jurisprudence (a rather curious association of subjects), in Harvard University. Since that period, most of the leading medical schools of our country, and even some of the second and third rate

schools, have made this branch a part of their regular systematic course of instruction, though, it must be confessed, a very small and insignificant part, inasmuch as it is usually tacked on to some other branch, like an unnatural excrescence, apparently to swell the size of the programme, and thus bid for popular patronage. I need hardly say that the amount of medico-legal instruction given in all such schools is exceedingly meagre.

In the year 1810, Dr. Benjamin Rush delivered an introductory lecture to his course on the Practice of Medicine in the University of Pennsylvania, in which he dwelt in an eloquent and impressive manner on the importance of the study of medical jurisprudence. But no further attention seems to have been bestowed upon the subject by the authorities of that institution for more than fifty years, when the liberality of one of Rush's most distinguished successors in the chair of Practice, the late Emeritus Professor Dr. George B. Wood, endowed a chair of Medical Jurisprudence and Toxicology, along with several other chairs, constituting what is known as the Auxiliary Faculty of Medicine in the University of Pennsylvania. This, I say, was the very first attempt ever made in this city even to recognize the science of medical jurisprudence. But even this was only a very partial recognition, inasmuch as the study was not made obligatory upon the student, nor was it regarded as essential to his graduation in medicine.

I remarked a few moments ago, that the legal profession in our city had made absolutely no provision whatever for instructing the law-students in the science of medical jurisprudence. This must certainly strike you as a remarkable and somewhat anomalous circumstance. It is, however, true that soon after the establishment by Dr. Wood of this chair in the medical department of the University, in 1865, the trustees created a professorship of medical jurisprudence in the law department of that institution. But, singular to relate, while the programme of the law school embraces (on the published catalogue) a professorship of medical jurisprudence along with the four other law-professorships, the students are quietly informed that attendance on the former course, although recommended, is not obligatory, and that they will not be examined thereon for gradua-

tion in law! As a matter of course, such an arrangement makes the medical-jurisprudence professorship a dead letter, and has proved a most effectual extinguisher to any attempt to instruct our rising generation of lawyers in the science of legal medicine. Yet I presume that the average common-sense mind among us, and among the public generally, will fail to comprehend by what species of intuition the Philadelphia law-student is to acquire a knowledge of *criminal law* without ever having learned the principles of medical jurisprudence! The simple truth of the matter is that our law-students are encouraged (so it would appear) to ignore criminal law altogether. It has been quite too much the fashion for our young barristers to look down with contempt upon this branch of their profession, as savoring too much of the quarter-sessions' practice. This, be it remarked, is a traditional prejudice, peculiar, I incline to think, to Philadelphia; but its absurdity is too evident to require comment.

I have ventured these remarks, gentlemen, because I am probably better aware than you can be, of the stubborn nature of the soil which you will have to overcome in our community before you can hope to gather much of a harvest in medico-legal research. I should greatly rejoice to see your Society taking a very decided stand in this matter, exciting the interest that it deserves, and that ought to be so spontaneous, in both the great professions of law and medicine in our city, and enlisting in its support and co-operation the best talent of both professions. In our sister city of New York, such a society has been in active operation for a number of years; it numbers among its members some of the brightest physicians and lawyers of that city, and its published papers contain most valuable material for the medico-legal student. Certainly, Philadelphia ought not to be lagging behind in this matter; nevertheless, I must in all sincerity say to you that we can hope for but little success, until we succeed in breaking through the pretty thick crust of indifference, not to say apathy and opposition, that we may have to encounter from both the professions.

Let me now turn to something more directly bearing on the occasion of my meeting you this evening, viz., to venture to throw out a few practical hints in relation to the cultivation of the study of medical jurisprudence. Let us first clearly

understand the meaning of the term. Medical jurisprudence, or, as it is sometimes named, legal or forensic medicine, is the science that teaches the application of medicine to the purposes of the law. The grand object of the law is the discovery of truth. In order to attain this object it lays under contribution every department of knowledge,—medicine among the rest. A superficial observer is surprised to discover the intimate relationship subsisting between the two sciences of medicine and law. How many doubtful questions are solved in a court of justice solely by medical jurisprudence! Think only of the numerous cases of sudden death, occurring under suspicious circumstances; of persons found dead; of real or alleged insanity; of personal identity; of infanticide and criminal abortion, and numerous other cases depending for their final settlement mainly, if not exclusively, upon medical testimony. In fact, every branch of medicine may be summoned to contribute its quota as occasion may arise. Thus, is it a trial for murder in which the proof of the crime is closely connected with certain marks of violence discovered on the dead body? at once the skill of the anatomist and surgeon, as also that of the pathologist, comes into requisition. Is it a trial for criminal abortion, infanticide, or rape? here immediately the knowledge of the obstetrician becomes indispensable. Is it a trial for poisoning? here the skill and experience of the chemist and toxicologist, and, it may be, of the botanist, will become absolutely necessary. And when the case is one involving the complex questions of insanity,—as in determining the validity of a will, or the criminal responsibility of a homicide,—who can give the required information, or enlighten the court and jury, save he who has mastered the complex and subtle study of the mental and psychological functions? It were easy to multiply illustrations of this nature, but the above will suffice to indicate the intimate connections subsisting between medicine and law.

It is sometimes the fashion to depreciate the study of medical jurisprudence, as being of no actual practical value to the student or the physician,—I need not say the lawyer also; but this mistake must surely arise from the grossest ignorance. It were easy to show the falsity of such an idea. One of the first cases to which the

young physician may be called, after settling down to practice, and one to which any of ourselves is liable any moment to be summoned, may be a case involving a knowledge of this very science. For instance, it may be a case of gunshot wound, or of dangerous injury from some other cause, or from the administration of poison. As a skilful physician or surgeon, he, of course, immediately addresses himself to the care of the patient. But should there be any suspicious circumstances connected with the case, and especially if the issue should be fatal, he must not for a moment suppose that his duties end there; far from it. His profession and his position both require him to go into all the circumstances of the case. Were these injuries, or this poisoning, homicidal, suicidal, or accidental? If death resulted from a pistol or rifle-ball, what were its direction and distance? If it is a poison case, then did the death really result from the poison, and, if so, what sort of poison? or what latent disease may have been the real cause of death? Or, is a lifeless body discovered in the water,—was the death here really caused by drowning, or was a murder first committed and the corpse subsequently thrown into the water in order to elude suspicion? A thousand questions of this sort are ready to confront the physician in his daily experience; and, unless he has added to his mere medical knowledge an understanding of the principles of legal medicine, he may find himself in an unpleasant predicament, since he will be compelled to assume the functions of the legal physician, when he subsequently appears in court, to give his medical testimony.

I trust I may be pardoned if I put this subject before you in a still more home-like manner, and try to draw a picture, the counterpart of which some of my hearers may but too readily recognize. Let me suppose a young physician, comfortably settled in practice, with everything around him prosperous and happy. Devoted to his profession and well instructed in all its details, he is anxiously looking out for cases on which to exercise his skill and dexterity. He is suddenly summoned to a case of fracture of the thigh, or, it may be, a dislocation of the wrist-joint. With promptitude he repairs to the suffering patient, and puts in practice the well-remembered instructions of the class-room and clinic. He applies his splints and bandages after

the most approved methods, he soothes the resulting inflammation, he closely watches for unfavorable symptoms, and he very naturally anticipates a favorable termination of the case; when, unhappily, either owing to some vice in the patient's constitution, some previous bad habits of life, some climatic or hygienic influence, or some of the other thousand contingencies over which the physician can have no control, the patient is attacked with erysipelas or pyæmia, which spreads with frightful rapidity; and after bringing him to the brink of the grave he slowly recovers, but, to the doctor's infinite chagrin and disappointment, with a shortened limb, or with a stiffened joint. And now comes the trouble. It not infrequently happens that the patient who has received so much kindness and skilful attention, turns upon his benefactor, and rewards him by instituting against him a suit-at-law for alleged malpractice, laying his damages at many thousand dollars. What a monstrous wrong! What flagrant injustice! you will exclaim. So, indeed, it is; but so a jury will not always decide; and a ruinous verdict may be the termination of the unhappy affair. Gentlemen, let me tell you, this is no mere fancy sketch; but it has been realized, possibly, in the experience of some whom I now address.

Now, what is the remedy for this evil? Mere professional sympathy on the part of his medical brethren will not meet it. You cannot reach it by mere enactments of law. The only effectual method of relief, I believe, is to elevate the standard of medico-legal knowledge in the professions of both medicine and law. Let the physician fully understand his medico-legal rights, as well as the principles and practice of medical jurisprudence; and he need then have no fear to encounter such obstacles as we have been considering.

But there is another aspect of the case quite as practical, and quite as important to the medical practitioner, involving a knowledge of medical jurisprudence,—I mean his position and duties as a medical witness. Professor Guy very appropriately remarks that "as witnesses in courts of law medical men have duties to perform for which the ordinary practice of the profession affords no adequate preparation, and, until of late years, medical education no proper training, and medical literature no sufficient guidance." As has been aptly

remarked by another, "a man may be well qualified to practise medicine as a physician or surgeon, and yet find himself very deficient when called upon to act as a medical witness." A notable illustration of this is afforded in the person of the illustrious John Hunter. This distinguished anatomist and surgeon was called as a professional witness for the prisoner, in a certain memorable trial for poisoning with laurel-water. In the course of the cross-examination, the great man completely broke down; he was unable to give a satisfactory answer to the final question put by the court, whether the death proceeded from the poison, or from some other cause. Hunter candidly admitted his deficiency, although he suffered most acutely from the mortification entailed thereby; and we are told that he deeply regretted to the day of his death, that he had not given more attention to subjects of this nature.

I think we are now prepared to understand that the duties of the medical jurist are quite distinct from those of the mere physician or surgeon. While the latter looks only to the treatment of disease or accident, and the saving of life, the object of the former, in a large proportion of cases, is to aid the law in discovering the perpetrator of a crime, or in rescuing an innocent person from an unjust charge. For instance, a medical man is summoned to attend a person laboring under the effects of a fatal poison, criminally administered, but at the time he may have no suspicion of the fact. In spite of treatment, death ensues. Here the function of the practitioner ceases, while that of the medical witness begins. It is utterly impossible for him now to escape giving evidence, or to shift the responsibility upon another. The law will insist upon his appearance, first at the coroner's inquest, and afterwards at the assizes. Now, I assume that, as a regular licensed practitioner, he is fully competent to answer every question put to him in the court-room relative to the general properties and effects of poisons, the quantity of each required to destroy life, the time when they prove fatal, the post-mortem results, etc. Then, if it is objected that the death was caused by disease, and not by poison, the searching inquiry will be as to what diseases resemble poisons in their symptoms, effects, and post-mortem characters; and, lastly, the liability to fallacy in the chemical

processes employed to detect the poison. This is only one of the many instances which illustrate the special duties of the medical jurist, and how they differ from those of the mere practitioner of medicine.

This leads me to recommend, as a matter of the greatest importance, the cultivation of the faculty of close and minute observation, on the part of those who wish to become proficient in this science. To observe well is one of the highest attainments in the medical art; but it is pre-eminently important to the medical jurist. Whenever he is summoned to a case, let him observe carefully and accurately *everything* around him, even the minutest circumstance. Nor let it be supposed that the cultivation of this habit of minute observation is at all incompatible with the highest professional character. No one ever doubted the skill and ability of Sir Astley Cooper as a surgeon, yet he cultivated this very habit to a remarkable degree; and, on a certain occasion, when he was summoned to visit a gentleman who was shot by a pistol-ball, this faculty was of signal service in enabling him to point out the murderer by a close observation of the direction of the ball, and the relative position of the injured man; and finally leading him to the conclusion that the weapon had been fired by a left-handed person.

I suppose there can hardly be a more embarrassing position for a medical man to occupy, than when for the first time he goes upon the witness-stand, to testify before a crowded court-room, in a capital case, and to deliver his *opinions* which may affect the awful issue of life or death to the prisoner at the bar. If summoned simply as an expert,—that is, to give his opinion on matters testified to by others,—his responsibility is, if anything, rather increased. But if he has first thoroughly studied the case, and scrupulously examined all sides of the question, and is master of the science of legal medicine, he need have no fear of the result, no matter how much he may feel annoyed and provoked by the attempts of a rude and blustering counsel, in the cross-examination, to intimidate him. Knowing that he has been sworn to tell the whole truth, and conscious of the desire *only* to bring out the truth, he will maintain a calm and dignified composure as a witness; he will not be betrayed into angry rejoinders to counsel, nor into an attempt to argue with him; he will

confine his answers strictly to the questions put to him, avoiding all prolixity, and all attempts to display his knowledge by haranguing the court and jury. He will not allow his temper to be ruffled (though if young in the business he will be sorely tempted), when questioned by a flippant counsel as to his professional abilities and opportunities, the number of cases he has attended, the mistakes he has made in his practice, and many other little matters calculated to vex and annoy him. Nothing makes a witness appear in a more ridiculous light, nor more prejudices his testimony before the court and jury, than the exhibition of a testy, irritable disposition when thus under fire. He should therefore most scrupulously guard against it.

I have already said that all his replies to counsel should be direct; they should never be evasive nor ambiguous, since this suggests a suspicion of either ignorance or dishonesty on his part. The answers should be given in a clear, audible tone of voice, and directed rather to the jury, inasmuch as they are specially interested in obtaining the information requisite to guide them in their verdict.

As a final suggestion, let me venture particularly to recommend the medical witness to avoid as far as practicable the use of all technical words or phrases. This is one of the most common and grievous faults to which he is exposed. From long habit of expressing himself before medical assemblies in technical and scientific language, he is led to employ, unconsciously, the same phraseology in the court-room, forgetful that neither the jury, court, nor counsel can possibly comprehend his learned utterances. How, think you, would an average jury understand his meaning, if, in describing a post-mortem operation on the head, he informed them that "he had reflected back the integuments and exposed the calvaria"? Would it not have been much plainer to them, and therefore much better for him, to have simply stated that "he turned back the scalp and exposed the skull"? How very few will know what he means when he talks about the "parietes of the abdomen," the "reflections of the peritoneum," the "os calcis" or "os femoris," the "dura mater," "pia mater," "corpus striatum," etc.? How far better to employ the simplest possible terms, and the plainest English, in describing what may be of the greatest importance for the

jury to comprehend! Many of you have doubtless read of the laughable scene described by the late Professor Taylor as occurring in one of the English courts at a trial for assault and battery, where the medical witness, in giving his evidence in the case, informed the court that "in examining the prosecutor he found him suffering from a severe contusion of the integuments under the left orbit, with great extravasation of blood, and ecchymosis in the surrounding cellular tissue, which was in a tumefied state. There was also considerable abrasion of the cuticle." This magniloquent description for a time bewildered the court, until it was resolved by the judge himself into the simple words—a *black eye*. Surely, no man of sense need be told that all such affectation and pedantry are in the worst possible taste, and are calculated to bring the witness into deserved contempt.

I have thus, gentlemen, ventured to offer you a few hints of a practical character, which, it occurred to me, might possibly be of use to those members of your Society who have not as yet had much experience in medico-legal matters. To many of you, doubtless, my suggestions may have appeared somewhat trite; but I shall feel gratified if I have succeeded in inspiring even a few of your members with a more lively interest in the pursuit of medico-legal knowledge, and a stronger determination to enlist the sympathy and co-operation in our city of the two great professions of medicine and law.

ORIGINAL COMMUNICATIONS.

THE EXAMINATION OF URINE.

Remarks read before the West Philadelphia Medical Society, September 3, 1883,

BY CHARLES W. DULLES, M.D.,

Surgical Registrar to the Hospital of the University of Pennsylvania, Fellow of the College of Physicians of Philadelphia.

THE work of analyzing the urine, as described in the books and as practised when a complete investigation is desired, is elaborate, and calls for special apparatus, as well as for special skill in handling it. But that which is of most common utility demands nothing which every practitioner may not possess. The only apparatus needed is a urinometer, some litmus- and turmeric-paper, some acetic acid, a few test-tubes, means of applying

heat, a solution of caustic potash, a microscope, with slides and cover-glasses, and eyes to use them.

With these one may learn all that is ordinarily necessary about the specific gravity and reaction of the urine, the proportion of urates and phosphates, and the presence or absence of albumen and sugar, and of tube-casts or other deposits. Other points of investigation which are treated of in the books are of insignificant importance compared with these, and a knowledge of them is rarely demanded. What I mean to speak about this evening is nothing of this sort, but the best way to make a satisfactory examination of the urine for ordinary clinical purposes.

Specimen.—The first thing to be done, if one wishes to analyze the urine, is to get a proper specimen; and of all the steps towards one's goal none is of greater consequence than this. It will not do to say to a patient, "Send me a sample of your water." One must be more precise, or he may find, as I have done, carbonate of magnesia, or shreds of muscular tissue, or the yeast-fungus of beer, coming apparently from a healthy bladder. The sample must be unadulterated. To secure this, my plan is to order a clean bottle and clean cork to be gotten from the druggist, directly into the former of which the patient is to urinate, if a man. For women, I order, in addition, a chamber-pot to be washed clean with hot water and scoured dry with a clean cloth. Into this the patient, and no one else, is to pass her water, and then pour it into the clean bottle.

The time of getting the specimen is of some moment, too. The most typical sample will be made up half of the last urine before bedtime and half of that first passed in the morning.

Such a specimen should be labelled with something to indicate from whom it comes and when it was collected, and sent at once to the examiner. To let urine stand any length of time is to risk the reliability of the whole examination; for it may undergo the acid or the alkaline fermentation, and give results absolutely contradictory to those which it should.

Inquiry should always be made as to the amount of urine passed in twenty-four hours, as well as the frequency of urination by day and by night, and the amount passed at each time. Inquiry about the latter serves as an invaluable check upon errors in regard to the

former, which are extremely common. Besides this, the answers often afford most useful hints as to the true significance of other facts ascertained in the ordinary examination.

One should never neglect to learn whether there is any local condition of the penis or urethra in men, such as balanitis, gonorrhœa, etc., or of the urethra, vagina, or uterus in women, such as caruncle, vaginitis, leucorrhœa, etc., which might supply a misleading element to otherwise normal or abnormal urine.

Thus provided with a proper specimen and forewarned if there be complicating elements present, the examination proper may be begun.

Method of Examination.—It is advisable, I think, to keep a little blank-book in the place where one usually examines urine, and to enter in it the details of each examination, not only for reference, but also in order to profit by accumulated experience.

Order of Examination.—Further, a certain order should always be observed, and not a desultory no-method. This order will naturally put first those points of investigation which require no apparatus, taking up afterwards those which require simple apparatus, and, finally, those where the apparatus is more complicated and where more time is demanded.

Thus, it is best to investigate and note—first:

A. THE PHYSICAL CHARACTERISTICS.

1. The amount passed daily.
2. The color,—its agreement with or deviation from the normal.
3. The clearness or turbidity, and whether the latter is uniform or flocculent.
4. The amount and character of the sediment when first seen.
5. The odor,—whether it is normal, faint, strong, fragrant, or offensive.
6. The reaction, and its degree, approximately.
7. The specific gravity.

The last point requires the decanting of a sufficient quantity of the urine into a wide tube, and the use of the urinometer.

The lower part of the specimen should now be poured into a subsiding-glass, to await microscopical examination of its sediment.

The subsiding-glass ought not, in my opinion, to be conical, but one with perpendicular sides. I prefer and always use

a tall test-tube with a foot. This should be covered (I use a pill-box lid or a flat card), to keep out dust and other foreign matters, and set aside to be examined after twenty-four or forty-eight hours.

First Examination of Sediment.—My own practice is next to take the bottle from which the urine was poured, and, by shaking it round and striking the bottom on my hand, to get one more drop from it for immediate examination under the microscope. This sometimes reveals as much as the later examination, and often furnishes a check as to the formation or change of crystalline deposits.

In any case, one may now proceed to determine what is of most consequence in regard to—

B. THE CHEMICAL CHARACTERISTICS.

Of these I will consider here only four :

1. Urates.
2. Phosphates.
3. Albumen.
4. Sugar.

Urates.—Ordinarily an excess of urates is indicated by a high color, and a turbidity which is dispelled by heating. This may be confused, however, by the presence of albumen, which begins to be precipitated as the urates are dissolved by the application of heat. In such a case the urine may be tested by standing the vessel containing it in a cup of hot water, by which heat enough to dissolve the urates will be secured, but not enough to throw down the albumen. Another indication of excess of some member of the urea group is found in a high specific gravity, with absence of a large amount of sugar. Another is unmistakably gathered if the addition of acetic acid to a clear urine causes at once a fine whitish precipitate to be thrown down. A diminution of the proportion of urates is indicated by a very light color and a low specific gravity.

Phosphates.—The presence of an abnormal amount of phosphates in the urine is usually indicated by a pale color, and sometimes by turbidity. Any turbidity which is cleared up by adding enough acetic acid to give the urine a distinct acidity may be set down to the presence of phosphates. On the other hand, rendering the urine distinctly alkaline and warming it will cause a precipitation of phosphates. If this precipitate is light and finely flocculent, it is probably normal.

It cannot be regarded as abnormal unless it falls densely or to a greater depth than a third of an inch in a test-tube three-quarters of an inch wide with two inches of urine in it. An abnormal diminution of the phosphates is indicated by a total absence of deposit, or by its being very small indeed.

Albumen.—The presence or absence of albumen may be determined by a variety of tests. Two of these are so superior in reliability to all others that I will mention them alone.

Nitric Acid Test.—The first is the "nitric acid" test. This is carried out by what is called "underlaying" the urine with strong nitric acid. This is usually done by pouring nitric acid down the inclined side of a test-tube containing urine, or urine down a tube containing nitric acid. A better way than either I have found to be the following: Pour urine to a depth of half an inch into a small test-tube; then take up about one-quarter fluidrachm of nitric acid in a long glass tube drawn to a tolerably fine point; close the top with a finger; pass the point down to the very bottom of the tube, and let the nitric acid descend slowly by rotating the glass tube under the finger and very gradually admitting the air. If the point of the tube be fine, the finger may be removed at once, and the descending column of acid, as in the preceding case, will lift the urine gently up, and an unbroken line of junction will be the result. This method of underlaying is the most delicate and most exact that I know of. If albumen be present, there will form at the line of junction between the acid and the urine a white, or whitish, layer of coagulation, the density and thickness of which indicate the proportion of albumen in the specimen. This test is liable to some confusion if the urine be turbid or much discolored, and also when there is present a large proportion of urates or carbonates. The former are sometimes precipitated as the urine becomes more acid, and form a cloud near the line of junction, which might deceive the unwary. But error may be avoided by observing that they form a *cloud*, and not a *layer*, and that they accumulate *above*, not at, the line of junction. The presence of an excess of carbonates will cause an effervescence, which may be violent enough to drive out all the contents of the test-tube.

Boiling Test.—The best test for albumen—all things being considered—is the “boiling” test. This may be applied by pouring a test-tube half full of urine, adding two or three drops of acetic acid, and boiling the mixture. If it becomes cloudy or opaque, albumen is present; if not, it is absent. The density of the coagulation, from a faint opaline clouding to absolute solidification, indicates the proportion from 1:1000 to 1:20. The latter proportion is about that of blood-serum: so it is easy to see how greatly exaggerated are statements that urine contained fifty or ninety per cent. of albumen.

Sugar.—Every sample of urine should be examined for sugar. Fortunately, saccharine diabetes is rare, but the possibility of its occurrence ought not to be overlooked. To find out whether it is present is among the easiest processes of chemical analysis. It requires no standard solution, no salt of copper, no bismuth, no yeast, only a solution of caustic potash, one part to eight parts of water, a test-tube, and heat.

Of the suspected urine a few inches in depth should be put into a test-tube, and half the quantity of the potash solution added and mixed. Heat is then to be applied, and, when the boiling-point is reached, if sugar be present the mixture will assume a darker hue, varying from light canary, which indicates the presence of one per cent., to black, which shows the presence of ten per cent. of sugar. While I am convinced that this test is as trustworthy as any I know of, and more trustworthy than many, yet its application, like that of other tests, has led me to think little of the indication of very small proportions of sugar, such as might be inferred from the canary color. For, either all the tests, except the fermentation test, react to other substances than sugar in the urine, or else sugar is present in small quantities in almost all urines. At any rate, a light canary-colored reaction with caustic potash is of very common occurrence.

With the investigation of these four constituents or ingredients of urine, all the chemical analysis that is of importance to the clinician will be finished. The tests for other substances, described in the books, have interest for the student of physiological chemistry, and occasionally furnish brilliant points for a lecture or paper. But the means of detecting and estimating carbonates, sulphates, indican, bile-pig-

ment, biliary acids, and even urea, will have to be made much more simple and much more exact before they can furnish much better information than any intelligent practitioner can gather without their help.

There remains, after the steps described, nothing to be done but to wait twenty-four hours for the sediment to fall, and then to determine the—

C. MICROSCOPICAL CHARACTERISTICS.

This procedure is to many practitioners impossible, because they have not the necessary apparatus. To others it may be of little value, or even delusive, because they have not the experience necessary to make it trustworthy in their hands. But it is in many respects the most important part of the whole examination. Indeed, it is an indispensable part.

Unfortunately, almost nothing can be said about it which can take the place of actual demonstration and long practice, although much can be learned by studying well-made plates of urinary sediment: the best of which, that I know of, being contained in the excellent Atlas of Ultzmann and Hofmann, published in Vienna, in 1871.

But a few hints drawn from my own experience may not be out of place here.

In cases where there is a dense deposit of urates entangled in mucus, it is well to let the urine stand for a few minutes in hot water, or to let it settle in a very warm place. Keeping the urine acid will prevent confusion on account of dense precipitates of phosphates; when they form, a few drops of acetic acid will clear them up without destroying other deposits. In every case where there is a dense deposit it is important to examine a drop drawn up with a pointed glass tube from several levels,—the lowest, the top, and the middle. After this, it is well to pour off all the supernatant urine, to shake the residuum up, and to examine a drop of this. When there is a well-marked nubecula, I think it important to examine a drop from just above it, as well as several from the bottom of the tube.

Some errors may be avoided by bearing in mind that fibrilli of mucus may look like hyaline casts, and that they may be distinguished from these by their very great length. To detect this often requires very careful focussing, by which they can

be followed across the field of the microscope and recognized by their general appearance, as well as by the length alluded to. When such fibrils are encrusted with urates, one must be especially on the lookout not to mistake them for casts. It is well to be on one's guard also against the appearance of flat epithelium seen on edge. This sometimes looks astonishingly like hyaline casts, but may be recognized upon slightly moving the cover-glass, or by excluding the idea of hyaline casts from their solitary appearance among easily-recognized epithelial scales.

Another practical point, upon which I would lay stress, is to examine the urine on the slide round the edge of the cover-glass, and not that only which is under it. Not infrequently an investigation which revealed nothing so long as only the latter was searched will prove very instructive as soon as the former is studied. For suggestive deposits are sometimes washed away from under the cover when it is allowed to fall upon the slide.

In concluding this part of our study, I will give a schedule for examining a specimen of urine, which includes the steps already given in detail.

SCHEDULE FOR AN EXAMINATION OF URINE.

A. PHYSICAL EXAMINATION.

Note 1. Amount passed in twenty-four hours.

2. Color.

3. Transparency or turbidity.

4. First sediment,—amount and character.

5. Odor.

6. Reaction.

Pour off upper part into a tall, broad test-tube or urinometer tube, and shake up lower part and pour into a tall subsiding-glass, cover it, and reserve for microscopical investigation after twenty-four hours.

Note 7. Specific gravity.

B. CHEMICAL EXAMINATION.

Pour about two fluidrachms into a test-tube, and

1. Add a few drops of acetic acid. (If the urine be alkaline, enough must be added to make it distinctly acid.)

If sample was clear and remains so: no inference.

If sample was clear and becomes cloudy: excess of urates.

If sample was cloudy and remains so: excess of urates.

If sample was cloudy and becomes clear: excess of phosphates.

2. Heat slowly until it boils.

If sample was clear and remains so: no albumen.

If sample was clear and becomes cloudy: albumen is proved.

If sample was cloudy and remains so: probably due to bacteria.

If sample was cloudy and becomes clear: excess of urates proved.

3. Add to sample, while warm, half its bulk of solution of potash.

If sample was clear and remains so: phosphates are diminished.

If sample was clear and becomes flocculent: due to phosphates.

If sample was cloudy and remains so: bacteria or foreign matters.

If sample was cloudy and becomes clear: due to redissolving of albumen.

4. Heat again at top.

If a canary or rum or brown or black color appear, it shows sugar.

C. MICROSCOPICAL EXAMINATION.

Examining a drop of the sediment left after decanting the urine from its bottle will often show all that a later examination reveals, and it ought to be tried. But in every case, after allowing a portion to stand for twenty-four hours, several drops in succession, from different levels of the sediment, should be carefully examined, and a note made of the result. A note should always be made of the reaction of the urine at the time when a microscopical examination is made.

We now come to another part of our subject,—namely, some points to be borne in mind in drawing clinical conclusions from an examination of the urine.

I think experience will warrant a modification of certain views not uncommonly held in regard to what is to be regarded as normal or abnormal in urine. The amount passed daily, for example, is usually set down in the books as about three pints, with a caution, it is true, that this is subject to variations. But this does not convey any adequate idea of the amount of variation which may exist without harm to the health. Now, this variation may range from one pint to many. The former is rare, and to be regarded with composure perhaps only in persons whose vegetative functions are very inactive,—as the old and

spare, for example,—or when the skin or bowels are very active; but its possibility is not to be overlooked in the zeal to detect morbid phenomena.

The latter—a large excretion of urine—is very common, and I am convinced that the amount normally excreted by healthy men is nearer five pints than three. In any case, one thing is quite clear to me,—viz., that the fixing of a given quantity as the average amount of urine to be excreted in health is utterly delusive, and that no more can be assuredly said about this than that the persistent excretion of very small or very large quantities should excite suspicion and investigation to learn whether the cause be consistent with health or not. Another point is that the *specific gravity* of healthy urine cannot be set down as being 1.020, if thereby there be the faintest implication that a departure from this—even a wide departure—is to be regarded as abnormal. That the contrary is the case I have satisfied myself by a large number of tests made in the past eight years, so that I know that a range from 1.004 to 1.040 is within healthy limits. The low figures accompany free discharge of urine, with the use of succulent food and large quantities of fluids. The high figures are found in summer-time when the perspiration is great, or at any time when the food is dry and the action of the skin or bowels is vigorous.

The point I would make in regard to this, without disparaging the value of an arbitrary standard for comparison, is that the varying specific gravities of urine have little diagnostic value, except when made significant by some other features. Thus, there can be no question of the indications of rising or falling figures when it is known that sugar is present in abnormal quantity or when a Bright's disease is present. But I know no other morbid states in which the figures of the urinometer disclose anything of importance which cannot be learned otherwise.

Another physical characteristic of urine is the *reaction* of urine. This is said to be faintly acid, with occasional faint alkalinity due to ingesta. In my own experience, I have found faint alkalinity very common. It has usually been observed in persons of low physical tone, but I do not regard it as of much consequence unless accompanying some more tangible evidence of renal or bladder disorder. Strong

alkalinity of freshly-passed urine is quite another thing, of course.

Strong acidity of the urine is not uncommon, and it sometimes indicates danger. It should always lead to a microscopical examination, to discover whether crystals of uric acid, the commonest origin of stone in the kidneys or bladder, are to be found.

The *color* of the urine is subject to somewhat the same influences as the specific gravity, rising and falling with this. But, in general, as is well known, a high color is indicative of rapid tissue-metamorphosis, and a low color of the reverse. The former is found in acute systemic disorders, the latter in chronic troubles. Pale urines generally grow paler, and high-colored urines more high-colored, after standing.

Of the *odor* the same may be said. Peculiar odors are often due to ingesta, as, for example, asparagus or turpentine. A fetid odor when the urine has just been passed is usually indicative of cystitis.

The significance of *urinary sediments* is to be clearly understood only after a microscopical examination. But all are familiar with the common brick-dust deposit of concentrated urines. The nubecula, which consists of mucus, and which forms in healthy urine after it stands a few hours, often misleads patients, but, of course, would not mislead a physician. But there is a peculiar sediment found in cases of cystitis, especially where this is set up by a stone in the bladder, which is almost pathognomonic. This is a slimy mass, which, on pouring, leaves the vessel very much as the white of an egg leaves its shell, sliding off in a soft but coherent mass.

The proportion of *urates* contained in any sample must be estimated in connection with all the other circumstances of the case. From my own experience, I should say that this is usually only confirmatory of a diagnosis made without its help. Thus, in acute fevers, in disorders of the liver, in heart-disease, one has probably already learned what is straining the excretory powers of the kidneys before the excess of urates is discovered.

As to an excess of *phosphates*, I believe its discovery never discloses any new feature of a case. When it is found, one has ordinarily abundant other evidence of the weak constitution or nervous strain of his patient, and ordinarily the physician examines for phosphates, in order to gratify the natural desire to see with his eyes what

is usually looked upon as the excretion of wasted brain- and nerve-tissue. A diminution of phosphates is compatible with perfect health, and has no important significance, taken by itself.

The presence of *albumen* in urine is quite another matter. Except in very minute proportions and at intervals, albumen indicates organic change in some part of the urinary apparatus. Any condition which adds pus or blood to the urine will be accompanied by the presence of albumen. Such a condition may exist in the urethra, the bladder, the ureter, the pelvis of the kidney or its tubules or parenchyma. Which of these is involved, the microscope and a rigid general examination of the patient alone can determine. The same is true of albuminuria due to nephritis. Here the microscope alone can determine what is the nature of the change, and whether it is acute or chronic. The chemical discovery of albumen should in every instance be followed by a careful microscopical examination. To neglect this is to commit an error which might lead to irreparable harm.

The detection of very small quantities of sugar in the urine is, as has been stated, a common experience, and may be taken too seriously. If it does not increase, and if the specific gravity of the urine be moderate, it may be regarded as of no unfavorable clinical significance. But when the specific gravity is high and the other evidences of glycosuria are present, of course it is important, and cannot be watched too carefully.

Finally, as to *urinary sediments*. These are the real and infallible proofs of what is going on in the genito-urinary organs. Each means a definite thing, and its presence or absence gives assurance as to the state or condition of the urinary apparatus in a way that nothing else can do. I have not time to go into details, in addition to those already given under the heading "*Microscopical Characteristics*,"—this is the province of the text-books,—but I cannot leave the subject without emphasizing again their great importance.

Thus, gentlemen, I have tried to indicate, in the first place, the simplicity of the process of examining urine in a way perfectly satisfactory for clinical purposes, and to show how little it demands complicated apparatus, how entirely it is within the command of every medical man.

In the second place, I have tried to point out a few points, deduced from experience, which I think may profitably be borne in mind in estimating the significance to be attached to what may be discovered in the course of a physical, chemical, and microscopical examination.

In conclusion, I will give a list of the apparatus required for such an examination as has been described :

Some test-paper.
A urinometer.
A test-tube.
A sediment-glass.
Acetic acid.
Solution of caustic potash. (One part to eight of water.)
A spirit-lamp.
A pointed glass tube.
A microscope, slides, and cover-glasses.
It will be found convenient to keep a blank-book for records in one's laboratory, and to have tacked up against the wall a card on which is written the following, to help to secure order and system in one's examinations:

1. Amount.
2. Color.
3. Clearness.
4. Sediment.
5. Odor.
6. Reaction.
7. Specific gravity.
8. Urates.
9. Phosphates.
10. Albumen.
11. Sugar.
12. Deposits.

I take the liberty of recommending such simple matters to others, only because I have found them helpful to myself.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.,
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EPITHELIOMA.

M. M. BLUM and Duval (*Arch. Gén. de Méd.*, Août, 1883), after carefully studying the various statements made by authors as to the nature of epithelioma (*cancroïde de la peau*), give their opinion that the study of this affection must be undertaken anew and from the foundation. Heretofore, epithelioma of the skin has been considered as a morbid entity subdivided into several varieties according to

the predominance of one or another constituent element. It is necessary now to study the modifications which may be impressed upon it by its situation, or by the nature of the elements in which it is developed. Certain forms of epithelioma are exclusively seated in the upper part of the face. Certain others, presenting characteristic features, are found on the back of the hand. The latter are rare. Gurlt encountered only eight cases in one thousand three hundred and seventy-seven cases of epithelioma.

Epithelioma of the hand is rarely met with except between the ages of sixty and eighty. It usually occurs in the site of an old scar, though it may develop rapidly in a recent cicatrix. A case illustrative of this is given by the authors, accompanied by a wood-cut.

Aside from their etiology, epitheliomata of the hand may show marked peculiarities in development. A case, with illustrative wood-cut and several pictures of microscopic sections of the growth, given by the authors, illustrates this. Here cicatrization of a spontaneous character took place in the centre of the tumor. Their conclusions show that the origin of the epithelial tumor in the case examined was only in the inter-papillary portions of the rete Malpighii. The hair follicles, sebaceous and sweat glands did not take any part in the new formation. Some of them, however, were deformed by the outside pressure of the growth.

The retrogression of the elements of the tumor was due to an inflammatory process of the derm, or to a formation of cicatricial connective tissue which surrounded and strangled the lobules of the tumor and caused resorption.

The authors conclude—1. That epitheliomata present multiple clinical varieties, the gravity of which depends on their seat and mode of evolution rather than upon their histological structure. 2. They are susceptible (under rare and exceptional conditions, it is true) of spontaneous cure over a greater or less area. The attentive study of such cases may perhaps serve as a guide to the rational treatment of these tumors.

THE NATURE AND TREATMENT OF LUPUS.

In a very important article published in the *Annales de Derm. et de Syph.*, August, 1883, Besnier, the distinguished head of

modern French dermatology, gives a full review of our present knowledge of the pathology and treatment of lupus.

In his opinion, lupus is in the strictest sense a scrofuloderm. All patients who have lupus are scrofulous or scrofulotuberculous. The arguments which have been brought forward to controvert this theory are as follows: 1. Lupus is not hereditary. 2. The symptomatology of lupus differs from that of tuberculosis (properly so called) of the skin or mucous membrane. 3. Lupus does not lead to tuberculosis. 4. Experiments upon animals show that lupus is not inoculable locally or by infection.

Besnier examines each one of these propositions in order to disprove them. As to the first, he says that the fact that lupus is not hereditary is the best proof of the local character of tuberculosis in its beginning. He has often seen patients with lupus become tuberculous, but he has never seen a confirmed tuberculous patient develop lupus.

As to the symptomatology of lupus differing from that of tuberculosis, if this were not the case why should they have received separate names? Are there not varieties of pulmonary consumption, each with its symptoms peculiar to itself? Are there not, indeed, varieties of lupus, from the benign patch on the surface of the cheek to the rapidly-eroding serpiginous varieties?

To say that lupus does not lead to phthisis is to repeat a legend which has been handed down from generation to generation, but which has no basis in fact. So far from it, modern dermatological authorities unite in admitting pulmonary phthisis as a complication of lupus to be feared. The time to state the exact proportion of lupus patients who suffer from phthisis has not come; but, turning to his own wards, Besnier finds that of thirty-eight cases of lupus, seen in June and July of the current year, no fewer than eight, or twenty-one per cent., showed physical signs of pulmonary consumption.

Finally, experiments lately made in animals go to show that inoculation with lupus-matter in animals may give rise to tuberculosis.

Lupus, therefore, in Besnier's view, being a local tuberculosis, and liable to lead to a general infection of the skin, its prompt and thorough treatment becomes a matter of paramount importance.

With regard to general treatment, the

health of lupus patients may and should be improved by tonics, etc., but these cannot be relied upon to affect the lupus itself in any direct way. Cod-liver oil has been recommended by some authorities, but long-continued experience shows that it has no influence on the disease. It is the same with regard to iodine, iodide of starch, iodoform, and iodide of potassium. Sulphur and arsenic may affect the general health favorably, especially when used in the natural mineral waters, but neither these nor any other internal agents can have a specific effect on the lupus.

The simple local medication of lupus may be of three kinds,—antiphlogistic or emollient, discutient, substitutive. The first, including vapor-baths, starch poultices, etc., have, of course, no action on the course of the disease, though they may be useful adjuvants. The discutients, as mercurial plaster, tincture of iodine, etc., may have in some few cases a temporary and apparent beneficial effect, but are rarely useful even in a temporary way. The substitutive irritants act just as an attack of erysipelas may act in exciting a frank inflammation, which seems to carry off with it a certain amount of morbid growth. Besnier has, indeed, never seen a case of lupus benefited by an attack of erysipelas. Repeated vesication represents the class of agents here discussed, and this, the best of all, has but little effect on lupus. The preparations of iodine and mercury, so long employed, should be entirely set aside. Used inefficiently, they give rise to much pain and annoyance; used thoroughly, they cause deep, irregular, unmanageable cicatrices, in the midst of which the lupus-growth makes its appearance again.

The surgical methods employed in the treatment of lupus are of three kinds,—extirpation, scraping, scarification. Of these, the latter is certainly the most simple and complete when it can be employed with propriety. The extent of the disease, and, still more, its seat so often on the face, nose, lips, etc., will, however, frequently forbid such operations, and even when they can conveniently be performed a cicatrix is left behind, often vicious, and in which occasionally the disease makes its appearance again. A somewhat similar objection is given by Besnier against the use of the curette for scraping. If the scraping is done thoroughly it is almost as bad as cutting the lupus out, while, unless it is done

thoroughly, relapses are pretty sure to take place. Acupuncture, multiple scarifications with needles or small knives, or “dilaceration,” as Besnier terms the operation, is in his opinion the best of these surgical operations. The incisions are made in close proximity and to a depth corresponding to that of the growth to be operated upon. They should in some cases be crossed by a series of others, so as to make lines like shading in a pen-and-ink sketch. The chief objection to this procedure is that it must be repeated so frequently in order to remove the growth thoroughly. Small patches are seen to be left, and these must be gone over again and again.

The addition of caustics, as in the injection of solution of chloride of zinc, etc., by means of a hypodermic syringe, whereby a drop of solution is placed under the skin at one point and another, is a painful and not a particularly useful method. In one case where solution of perchloride of iron was used a cure resulted, but the skin was tattooed with indelible iron-stains.

The chemical caustics *en masse*, as caustic potash and arsenic, Besnier condemns without reserve. Arsenic is highly dangerous.

Theoretically the actual cautery is the best method of treatment, and indeed this is recommended by many authorities, but Besnier rejects it because of the extensive and useless destruction of tissue, because it necessitates the use of general anæsthesia, and because the process of cicatrization must be followed up and directed by means of repeated cauterizations with nitrate of silver.

The form of treatment preferred by Besnier, and indeed now used by him to the exclusion of all others, is what he calls “interstitial,” punctate or linear cauterization with the thermo-cautery or galvano-cautery. The advantages possessed by this method are that the amount of destruction of tissue can easily be regulated, that healing takes place rapidly, and that there is no danger of spreading the disease by the operation itself, which Besnier thinks possible in any cutting operation for the relief of lupus.

The thermo-cautery, which is now within reach of all practitioners, can fill all ordinary indications in the treatment of lupus, but the galvano-cautery is more generally useful, because the knives and points can be made of all desirable sizes and shapes

to fill every indication. Besnier figures no less than nineteen different shapes which he makes use of from time to time. The battery he employs is a bichromate battery, the intensity of action being regulated by an assistant. The platinum points are only heated to a red heat. The difference of sensation where healthy tissues are reached enables the extent of action to be carefully regulated. The after-treatment is perfectly simple: a little powdered starch or a water dressing is all that is required.

A NEW LOCAL APPLICATION IN PSORIASIS.

Auspitz (*Wiener Med. Wochens.*, Nos. 30 and 31, 1883), considering the various methods of external application in psoriasis as inefficient in some particulars, has devised a mixture of chrysarobin and "traumaticin," the liquor gutta-perchæ of our Pharmacopœia. The advantage of this preparation is that the chrysarobin cannot be rubbed off on the clothes or spread about on the healthy skin, but remains in the place where it has been painted for several days.

The method of using it is as follows. The scales are to be removed as completely as possible by means of a hot bath with soap, after which the solution of chrysarobin (ten per cent.) in liquor gutta-perchæ is to be rubbed into the patches with a brush, the bristles of which have been cut short so as to allow a certain amount of friction to be employed. The pencilling and rubbing with the solution is to be repeated daily, the crusts being removed by soap and water every two or three days if they accumulate. Five to ten days usually suffice to remove the patches completely.

FEIGNED SKIN DISEASES

Two interesting cases have recently been reported. Dr. I. B. Fortner (*Lancet*, August 25) gives the case of an unmarried woman 25 years of age, who applied for the relief of a supposed loss of power in the thumb, probably hysterical. Shortly after coming under observation, certain peculiar lesions showed themselves on the back of the right hand and wrist, consisting of four oval abrasions, three-quarters of an inch in length by one-quarter broad, and presenting the appearance of a blister from which the cuticle had been removed, leaving a raw surface bathed in serum. Zinc oxide ointment was applied and the limb securely strapped and bandaged, when the sores quickly healed. New ones ap-

pearing a little later, Dr. Fortner, suspecting the artificial character of the lesions, took occasion to rub a stick of lunar caustic over each abrasion until considerable pain resulted. This acted as a deterrent, and no more sores appeared. Seven months later, however, the patient returned with the same lesions. She belonged to a markedly neurotic family, and Dr. Fortner very properly reached the conclusion that the lesions had been artificially produced, probably to create sympathy.

A second case was reported by Dr. Murrell (*Lancet*, vol. ii., 1883, p. 447). A young girl of 14, subject to fits, showed certain lesions which had appeared on and off for a year previously, breaking out immediately after the nervous phenomena called "fits." According to the history given, the arms and legs alone had been affected, the eruption coming on in the night, and the lesions presenting, when examined, the appearance of blisters or burns, and taking a long time to heal. Of late "bladdery heads" had formed full of water, and these burst leaving sores. On examination, several elongated patches like recently-healed blisters, one and a half inches long by one-half inch broad, could be seen on the arms and legs and under the mammary region. Although when taxed by the examining physician the patient persistently denied having produced the lesions upon herself, yet there seemed no doubt that the lesions were artificial and self-made.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF PROF. H. C. WOOD.

Reported by LOUIS J. LAUTENBACH, M.D.

A CASE OF EPILEPTIFORM NIGHTMARE.

THE first case which we have to-day is a very extraordinary one. The gentleman who is the subject of our study was formerly in the United States Signal Corps. While on duty he began to have some dyspeptic symptoms, with a sense of terror at night, and disturbed sleep. He first began to have spells two years ago, which have continued ever since. They have never occurred when he was awake, but have been nocturnal from the beginning. The spell begins with a scream,

which is described by those who have heard it as something unearthly in tone and violence. Indeed, since he has been here in the ward he has waked up patients who are even in the farthest part of the building. The scream is repeated two or three times, and then he begins to work his limbs with the utmost violence. The movements appear to be, to some extent, purposive. (If the character of the movements are such that the individual the subject of the attack gets up and throws his arms around an attendant, so that the involuntary acts are directed apparently with a definite purpose, we say that the movements are purposive.) We do not find the tongue bitten, nor does he wet the bed. He tries to spring out of bed. He strikes around violently, and has thus seriously injured himself as well as his attendants.

This morning he had an attack while asleep in a chair. He sprang forward, and would have plunged into the fire had not an attendant caught him. Every night he has at least one of these attacks, sometimes two or three. After the attack he is left in a condition of exhaustion, and the next day he is nervous and unable to work. It is a very serious case. He has been under Dr. Hammond's care, as well as that of other neurologists, without any benefit.

The first thing to make out in this case is the diagnosis; and the first question which presents itself is as to whether he is suffering from epilepsy or not, and this question must be studied very carefully before we can hope to come to any conclusion. The fact that the attacks came on after the age at which epilepsy usually develops is a grain of evidence against its being epilepsy. Then the movements appear to be purposive, and are not simple convulsions, and then, again, he does not bite the tongue, and there is no tendency to deep sleep after the attack; so that in all these respects the attack does not agree with pure epilepsy; yet you probably know that sometimes you have epileptic paroxysms in which active purposive movements occur. The case of a master-builder, related by Trousseau, who, when he was seized with an epileptic attack while at his work on a high building, would pass safely over the most dangerous places, affords a remarkable example of this.

Leaving now epilepsy, we will endeavor to find what it would be if it were not

epilepsy. We are now brought face to face with nightmare and somnambulism. In these conditions the eyes are sometimes open and sometimes shut, but are usually open. The patients rise, go down-stairs, and do various actions which are utterly outside of consciousness and about which the next day they have no recollection at all. They walk and act while consciousness is suspended. There is a definite relation existing between dreams and this nightmare. A horrible dream may so act on the lower centres of the brain that it may eventuate in action, or it may simply exhaust itself as a dream. Terror in these conditions always plays an important part. As the result of stimulation of the lower motor centres we may have either noises or the ordinary nightmare.

I remember that, when I was a medical student, near me there was a man in danger of secondary hemorrhage as a result of an operation. As there was no doctor near, they had orders to send for me if anything should occur. During the night I had the idea that a man was under the window calling me, saying that the patient was bleeding to death, while I, who should have been of so much help, was unable to get out of bed because I was paralyzed.

In these conditions a moment seems like an eternity. A man may think he is passing through weeks of horrible suffering, when he has been asleep but a few seconds.

As nightmare usually occurs, it is not of much moment. In the severer forms in children we have what are termed night terrors. The child wakes with a cry and is seized with various phantasies, which usually take the form of some horrible creature about to carry the child away, or of some monster injuring the child's friends. While this is occurring, if it be spoken to, although it may gaze at the speaker no comprehension of the meaning of what was said enters the child, but it will continue its vacant stare. If, however, the child be thoroughly roused, it will probably cry for a short time, so natural has the delusion appeared. The condition is one of horrible semi-consciousness, and it is usually from fifteen minutes to half an hour till the child can be appeased. Usually, when the subject of a nightmare is awakened, his mind is perfectly clear, except that he cannot believe that what he saw had not actually occurred.

A dream with automatic action is called

somnambulism ; with terror, with or without automatic action, nightmare. In nightmare there is always some horrible impending evil with which the subject is unable to combat. He feels as if he were destitute of the use of his muscles. Whether this case be one of epilepsy or not, it is always of more or less serious import and is by no means to be viewed as trifling. There have been cases where the ordinary nightmare has been the cause of destruction of a man's life. There is a medical teacher under my charge now who has such fearful dreams that he dreads to go to bed. If a man has the nightmare, the nightmare dominates the man's life. Everything is centred to avoid the terror and suffering it brings with it. Wealthy men who are the subjects of nightmare usually have an attendant who watches over them at night, and the moment the nightmare comes on wakes the patient ; and yet the patient will protest that he has been under the influence of the terrors for quite a length of time,—in fact, will frequently not believe the attendant that he was awakened the moment the nightmare appeared.

Whether this case be one of epilepsy or some one of these forms of nocturnal disturbance which are somewhat related to it, but which in some particulars are sharply defined from it, remains for us to determine.

I hardly think that we can call it nocturnal epilepsy, but that it must be placed near the ordinary nightmare of children. Against epilepsy we have the age ; there is no incontinence of urine at night ; there is no biting of the tongue ; there are no epileptic attacks unless asleep ; the movements are to a certain extent purposive. The scream of epilepsy is rarely repeated ; one unearthly, demoniacal scream circles about, filling all space, and then ends in silence. This man's scream is only hushed for a moment to break forth anew. This condition is an attendant rather of nightmare than epilepsy. The other day he said that he had no remembrance of dreams, but he now says that he has a troubled, confused sense of ugly dreams. He has never had any of the attacks except during sleep. The other day, the moment the scream was over the attendant spoke sharply to the man, and he immediately roused up.

I think the case one of nightmare due to a peculiar condition of the brain, of

whose pathology we may speculate, but of which we know absolutely nothing. This view of the case has been confirmed to a certain extent by the result of treatment. He has taken large doses of the bromide, and has become steadily worse under its influence. He has also been treated with large doses of arsenic, which seemed to do no good. Nothing has ever done him any good, although he has been under skilful treatment. We tried here in the hospital chloral in twenty-five-grain doses, but it had no effect on the prevalence of the attacks.

When we come to the treatment of nightmare in the child we must attend to the hygiene, get the health to the highest possible point, and then see that the child eats a light supper. Unless the supper partaken of be light, the rest is broken and disturbed, and dreams are produced by the heavily-loaded stomach.

We have also noticed that frequently a sudden shock, such as a cold douche given while the patient was under the influence of the nightmare, has broken up the habit. Cases of obstinate somnambulism are almost as trying as this man's case. Many cases of fractures have occurred from these patients falling from a height ; almost invariably this has cured the habit. Sometimes the habit of the nervous system has been successfully broken up by placing a bathtub full of very cold water so that when he gets out of bed he falls into the cold water. In this man's case we will try the effect of this treatment.

For the benefit of the attendants and of the residents, we will leave him sleep in the daytime and keep him awake at night. For about six hours preceding his sleeping hours he will not be allowed any food. The moment the attack comes on he will be soused with ice-water, in the hope that it will stop the attack and that possibly it may break up the habit permanently.

Why one is more prone to have the nightmare when lying on the back than when asleep otherwise is not known. The moment the position on the back was assumed he has been moved by the attendants on the side. They say that he has not had the attacks so frequently as before. He, himself, does not think that he would have the attacks as hard if he could sleep all night through on his side. He should get a case for himself. He should get a first-class coffin constructed of two boards,

one to press on his back and the other for the front part of the body, so that it will be impossible for him to get on the back. As you know, the attack which he had this morning came on while he was sitting up, so that I do not anticipate that he will derive very much benefit from lying on his side. It will certainly not cure him, absolutely.

As to the medical treatment, I hardly know what to give the man, as he has tried the bromide of potassium, chloral, and arsenic, without benefit.

In all these obscure cases you should have the passages from the bowels watched, as occasionally you find the cause of the trouble to be rectal irritation by a parasite. I remember a physician who was treated for mastoid pains, where he was cut and blistered, the periosteum scraped, and there was talk of trephining. Finally he came to me. I had his stools examined, and found that he had tape-worm. The parasite was gotten rid of, and the mastoid pains were cured. Such cases do not occur often, but only occasionally.

To sleep during the day and to be watched constantly, to be well douched the moment there is evidence of the paroxysm, to be careful about food, not to eat anything within six hours of his bedtime, to have his passages watched,—this is briefly the outline of the treatment.

TRANSLATIONS.

THE LOCALIZATION OF MOTOR LESIONS IN THE CEREBRAL CORTEX.—From a careful analysis of a long series of clinical cases Messrs. Charcot and Pitres draw the following conclusions as to the production of motor lesions in disease of the cerebral cortex in man:

1. All the cortical lesions of the cerebral hemispheres in man do not give rise to disturbances of voluntary motion. In this special point of view the cerebral cortex may be divided into two distinct districts,—the *non-motor zone*, whose destruction never produces permanent paralysis, and the *motor zone*, in which destructive lesions always produce permanent paralysis on the opposite side of the body.

2. The non-motor zone includes—1, all the pre-frontal region of the brain (orbital lobe and first, second, and third frontal convolutions); 2, the entire occipito-pari-

etal region (the occipital lobe and the superior and inferior parietal lobules); and, 3, all the temporo-sphenoidal lobe.

3. The motor zone includes solely the frontal and ascending parietal convolutions and the paracentral lobule.

4. Paralyses produced by destructive cortical lesions have different clinical characteristics according to the seat and extent of the lesions. Total hemiplegias of cortical origin are produced by extensive lesions of the ascending convolutions; partial palsies are produced by limited destruction of the same localities.

Among these partial paralyses, or monoplegias, the following may be recognized:

a. Brachio-facial monoplegias, which coincide with lesions of the inferior half of the ascending convolutions; *b.* Brachio-crural monoplegias, depending upon lesions of the upper half of the ascending convolutions; *c.* Facial and lingual monoplegias, which depend upon very limited lesions of the inferior extremity of the motor zone, and particularly of the ascending frontal; *d.* Brachial monoplegias depend upon very limited lesions of the middle portion of the motor zone, particularly of the middle third of the ascending frontal; *e.* Crural monoplegias depend upon very limited lesions of the paracentral lobule.

5. Whether total or partial, paralyses produced by destructive cortical lesions are permanent, and, after a certain time, are accompanied by secondary *contracture* of the palsied muscles and descending degeneration of the pyramidal strands.

6. Irritative lesions of the cortex may cause epileptiform convulsions (partial, Jacksonian, or cortical epilepsy). Such convulsions may be very readily distinguished from true epilepsy, as they originate with a motor aura, and may be either general or confined to one-half the body (hemispasm) or to a single group of muscles (monospasm).

7. As a rule, lesions capable of producing epileptiform convulsions are situated in the neighborhood of that cortical region whose destruction would produce paralysis in the muscles first affected. The causative lesions may, however, be found either in the motor or the non-motor zone, and no such definite relation between the character of the epilepsy and the location of the cortical lesion can be fixed as exists between paralyses of cortical origin and the lesions producing them.

8. The history of motor localizations in man is founded upon the comparison of many hundreds of concordant and careful observations. There is not one of the facts regarded as opposed to the doctrine of cerebral localization but is open to criticism; there is not a single opposing fact capable of demonstration. All the observations reported as disproving the fact of localization are unreliable, either on account of the complex nature of the lesion (multiple lesions, effusions, tumors, etc.) or because unaccompanied by sufficient details.—*Revue de Médecine*, October 10, 1883.

THE PERCENTAGE OF CHLOROFORM IN THE BLOOD OF AN ANÆSTHETIZED ANIMAL.—MM. Grébaut and Quinquand have determined the percentage of chloroform in the blood of an animal narcotized by that agent, by distilling in vacuo the chloroform from the blood, and then determining its percentage by the power possessed by the chloroform of reducing the cupropotassic test, in the same way as the percentage of sugar is determined in a liquid, it having been found that 18.7 C.c. of a solution containing 0.005 grm. of chloroform will reduce 0.3 C.c. of Barreswil's solution.

In seven experiments conducted after this method they found that the average quantity of chloroform present was 1 grm. for every 2000 C.c. of blood, the actual figures ranging from 1800 to 2181 C.c. From this they conclude that the anæsthetic dose of chloroform is 1 grm. of chloroform for every two litres of blood, or $\frac{1}{2000}$.

Other analyses have shown that the fatal dose of chloroform is extremely near to the anæsthetic dose,—an additional fact pointing to the danger of employing chloroform as an anæsthetic agent.—*La France Médicale*, October 13, 1883.

THE USE OF ATROPINE IN CORYZA.—The power possessed by atropine of diminishing the secretion of the nasal mucous membrane led Gentilhomme to employ it in acute coryza. In several severe cases, characterized by profuse secretion, fever, and difficulty of breathing, which in one case closely resembled asthma, one-half milligram of atropine given in pill form served to arrest the disease entirely. When the disease has passed through the acute stage, its administration improves the gen-

eral condition, but its effect is not as striking as when given in the acute stage. Lublinski also reports decided improvement resulting from the administration of one milligram of the sulphate of atropine at the onset of acute coryza, and the duration of the disease appears to be considerably reduced by the administration two or three times daily of one-half to one milligram. In chronic nasal catarrh, however, he could not find any improvement resulting from this treatment.—*Deutsche Med. Zeit.*, October 11, 1883.

THE PATHOGENIC IMPORT OF TUBERCLE-BACILLI.—After a series of culture and inoculation experiments, made in conjunction with Dr. Arndt, in Königsberg, Dr. P. Baumgarten concludes that it is the peculiar bacteria discovered by Dr. Koch and himself which call the tubercular process into existence. If it be urged that the contagion does not exist in the bacilli but is simply associated with them, he would reply that from the experiments it is evident that this hypothetical extra-bacillar virus is so intimately bound to the bacilli that it acts only with them and through them, since the disease may be caused by bacilli artificially cultivated in albuminous material, in which they are capable of infinite increase without losing this hypothetical infection.—*Centralblatt für Medicinischen Wissenschaften*, No. 42.

THE USE OF METALLIC MERCURY IN INTESTINAL OCCLUSIONS.—The old practice of administering metallic mercury for volvulus has been revived by Dr. Bettelheim, who reports seventy cases of intestinal stenosis treated by this method: fifty-seven were entirely relieved by its use alone, and in none of the seventy were there any bad effects noticed. In six cases the remedy saved the lives of the patients. It is claimed that it acts promptly and efficiently, without any of the inconveniences which have been attributed to it.—*Deutsches Archiv für Klin. Med.*, and *Paris Medical*.

TRICHLORACETIC ACID IN URINE-ANALYSIS.—Raade proposes the use of trichloroacetic acid as a test for albumen in the urine, used in place of the nitric acid in Gmelin's test, and in the same manner.

BROMIDROSIS PEDUM.—The subnitrate of bismuth is recommended for offensive sweating of the feet by Dr. Vieusse, of Algeria.—*Gazette Hebdomadaire*.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 1, 1883.

EDITORIAL.

THE ETIOLOGY OF HAY-FEVER.

THERE have been within the past two or three years a number of contributions to medical literature upon topics indirectly connected with the subject of hay-fever, which combine to throw some additional light upon the pathology of this, in many respects, peculiar disease. The publications of the Hay-Fever Association, and especially of two of its members, Dr. Morrill Wyman, of Boston, and the late Dr. George M. Beard, of New York, had already shown very definitely the geographical distribution of the disorder, and demonstrated conclusively that residence in certain places before and during the period of the customary attacks will confer complete immunity from them. To the well-known resorts in the White Mountains and on the sea-shore, might be added several that deserve to be better known in Pennsylvania: prominent among which is Kane, in McKean County, situated at the highest point attained by the Philadelphia and Erie Railroad in crossing the Alleghany Mountains. From personal experience, we know that this spot is constantly visited by hay-fever victims, who, while there, remain free from manifestations of the disease.

Although experience and observation had apparently established the fact that the immediate cause of hay-fever is contained in the atmospheric air of certain localities, we have the testimony of Dr. J. O. Roe, of Rochester, that in many hay-fever patients there may be found hypertrophies of the nasal mucous membrane; and he also reports cases* in which there was complete

immunity from subsequent attacks conferred by removal of the hypertrophies over the turbinated bones.

On the other hand, a medical correspondent of the *Chicago Tribune*† very positively declares that the cause of the catarrhal symptoms "is not, after all, hay, grain, or the rose, or the peach, but the beautiful and widely-worshipped golden-rod, whose burr-like pollen-cells are especially adapted for the rôle of local irritants of the mucous membrane of the upper air-passages;" and he claims that these cells are carried into the nostrils through the agency of minute aphides. The correspondent considers these insects as the real cause of the disease, and recommends examination of the secretions, in order to discover if they contain their ova or larvæ. He suggests that some analogy may exist between intestinal worms and these parasites, and says that a diseased condition from such a cause "seems as reasonable as that from the presence of ascarides in other mucous surfaces."

Blackley, in his classical work,‡ declares, however, that, whatever might be the nature of the influences which modify the activity or power of pollen in producing hay-fever, this power was always present, in a greater or less degree, in all the plants he experimented with. In other words, since pollen of various kinds may cause the disease, it has no specific poison, whether vegetable or animal. We recall, in this connection, the fact that the microscopic investigations made by Prof. Leidy§ failed to demonstrate any specific cause for the disease.

In a communication to the last meeting of the American Laryngological Association, Dr. John R. Mackenzie, of Baltimore, claimed that he had discovered a nasal reflex centre for cough, in the mu-

† Republished in Fort Wayne Journal of Medical Sciences, October, 1883.

‡ Experimental Researches on the Causes and Nature of Catarrhus Æstivus. London, 1873.

§ Amer. Jour. Med. Sci., January, 1879, p. 85.

* Transactions of American Laryngological Association.

cous membrane of the upper portion of the septum, within a well-defined area. When this centre was irritated, whether by a foreign substance, or by a turbinate hypertrophy, or by the touch of the experimenter, cough was immediately produced, —in some persons more decidedly than in others; thus corresponding perfectly with the well-known ear-cough. Combining this with the foregoing, it would seem that this discovery throws more illumination upon the cause of hay-fever than we had before.

The fact of the existence of a personal idiosyncrasy with regard to this disease, as asserted by Phoebus, of Giessen, has been repeatedly observed. This may be explained, in part at least, by the discovery made by Dr. Roe of the existence of antecedent local disease. The fact of the necessity of the presence of an aerial agency in its causation also is demonstrated both by its geographical distribution and by experiment. The *modus operandi* of the particular irritant in each case and the mode of production of the peculiar symptoms are explained to a certain extent by the discovery made by Dr. Mackenzie. Hay-fever, then, is a peculiar catarrhal affection of the upper air-passages and associated regions, with a strong neurotic element (as shown by the paroxysms of coughing and sneezing, the sudden onset of the disease, and its occurrence principally among the higher classes and in persons who lead sedentary lives). It does not occur in all persons, but one attack predisposes to future attacks; and, although occasioned by various forms of irritants, certain individuals may be obnoxious to only one variety of irritant.

The treatment to be pursued is either to change the residence, so as to remove the patient from the sphere of activity of the special irritant in his particular case, or, as far as may be possible, to render him insusceptible to the action of the irritant by local measures to the upper air-passages:

possibly by the use of a respirator and the application of detergent alkaline and antiseptic sprays to the inflamed mucous membrane, and other similar symptomatic means, until the period of the prevalence of the disorder has passed away.

HOMICIDE SECUNDUM ARTEM.

A PROMINENT physician of this city some years ago was called to see a young colored man who presented the usual symptoms of hydrophobia, and he gave the diagnosis accordingly. Returning some hours later, he found, to his great astonishment, that some of the neighbors had gathered in the room and were preparing to smother the patient with a large feather bed, which they considered the proper and the only thing to be done under the circumstances. These ignorant colored people, however, did not stand alone in the idea that when a person has hydrophobia it is both right and proper to put him out of his misery *secundum artem*. That this opinion is so wide-spread, and really not confined to the lowest classes in the community, suggests the horrible thought that other cases have occurred, and possibly not without the sanction of some ignorant but well-meaning physician. There is also a very common notion that an accoucheur on finding that an infant is deformed, or is a monstrosity, has a right to deny it proper care and to destroy it. As the ranks of the profession are recruited from those of the laity, and not always from the most intelligent and cultured portion of it, popular errors are thus liable to enter and be perpetuated in practice. This probably is the reason why proprietary medicines are still prescribed by some physicians, who thus betray a kind of atavism, by the persistence of ante-natal modes of thought not derived from their Alma Mater.

Some recent communications to medical journals seem to invite discussion of the question of the right of a physician deliberately to destroy life in another human

being, when his own life is not in danger. Two of them show such a misappreciation of the duties and privileges of the medical attendant that we cannot refrain from mentioning them. A correspondent of the *Boston Medical and Surgical Journal* inquires as to the duty of a physician when a monstrosity is born, whether or not it shall be suffered to live, and states that his preceptor had told him that it had been invariably his habit to destroy all such monstrosities occurring in his own practice! But a more remarkable case is one by D. Scott, M.D., of Pierre, Dakota, in the latest issue of the *Chicago Medical Journal and Examiner*. The patient was a man about 40 years of age, a pauper, living—or rather dying—alone in a cabin, covered by filth and flies. Obeying the direction of the commissioners of the county, Dr. Scott saw the man, who was in a terrible condition, the result of ser-piginous phagedæna, which in its course had destroyed the external genitalia and had spread into a large ulcer from the perineal to the hypogastric region. The reporter asks, "What was the duty of the conscientious physician under the circumstances?" By a curious interpretation of the golden rule, he concluded to give him "a teaspoonful of Magendie's solution of morphia, which carried him rapidly into peaceful oblivion and final euthanasia twelve hours later."

Probably the poor man would not have survived very long at the best; but the physician, in his account of the case, does not appear to entertain any doubt of his possessing the right to dispense euthanasia. Some allowance, of course, must be made for the fact that the case was on the borderline of civilization, where proper conveniences for treatment were not at hand; but we fear that even the benevolent intentions of the one who offers a patient the happy release will not make killing anything but homicide in the eyes of the law.

NOTES FROM SPECIAL CORRESPONDENTS.

COLUMBUS, OHIO.

MEDICAL ETHICS "OUT WEST."

THERE is no provincialism so narrow and hopeless as that which may be found in a metropolis. A metropolitan, finding in his city everything that he wishes, and caring nothing for an acquaintance with the outside world, may live in his microcosm in contented ignorance. *Per contra*, the real provincial has many wants which bring him in person or vicariously to the metropolis, and he soon comes to know what is going on there as well as at home. It is, therefore, true, even if paradoxical, that one may find higher examples of culture in country towns than in great cities. This rambling beginning is intended to point a moral later on.

When metropolitan indifference gives way to enterprise, some queer things occasionally happen, as is abundantly illustrated in the literature of travel. A journey by a citizen through countries unfamiliar and which he has thought of before only with contempt, when put on record, is always amusing, if not instructive.

For instance: The Metropolis (with a capital M) has recently been enlightened by a wandering luminary of the *Medical Record* concerning the West,—more specifically, the great Northwest. The correspondent takes occasion to make some remarks upon "the Western medico generally," from which we extract the following gem: "Our Western confrère has perhaps heard of the Code,—in rare instances he has even read it some,—that is, the old one,—but he does not hanker after it. Nevertheless, he tries to lead the life of a gentleman." He feels satisfied that he can do this through the prompting power of his own impulses: hence he cares little for the old Code, and just about as much for the new one. He upholds regularity, especially in the matter of sending bills, yet he rarely hesitates to meet his homœopathic brother,—openly, as they do most things out there in that benighted West, not on the sly, as they do some things down here." I need scarcely say that this is untrue—to speak mildly. The action taken with reference to the New York insurgents (in the matter of the Code) in the last two meetings of the American Medical Association very clearly shows the attitude of the Western medical mind to the Code, for the dominant element in the Association is Western, at least in point of numbers. Having a fair acquaintance with the profession in Ohio, I can assure you that I know of no reputable practitioner who violates the Code.

Travellers should be careful in selecting their company, if they desire to give truthful pictures of the best society in any country.

STATE BOARD OF HEALTH.

There are rumors abroad that a more determined effort than any hitherto attempted is to be made during the coming winter to establish a Board of Health in Ohio. The excellent results achieved in other States make it a matter of wonder that the three leading States of the Union should be so backward in this matter. There are here many factors which stand in the way. Ohio has always had her full share of irregular practitioners, and since Illinois and West Virginia have dumped the greater part of their refuse into the State, this element has become larger and more important in the eye of the politician.

We have also nine regular medical colleges, a number sufficient to insure active competition and create a suspicion of mutual jealousy not favorable to harmonious action in any direction. When we add to this the intense ignorance of the average legislator in matters of hygiene and medicine, we see that such a movement has much resistance to encounter, both aggressive and passive.

TYPHOID AND MALARIAL FEVERS.

In this part of the world we are at present having quite a number of cases of typhoid fever with malarial complications, a condition attended with some puzzling symptoms. Occasionally a patient who has been exposed to the cause of typhoid will contract a malarial poisoning during the incubative period. The physician naturally makes a diagnosis of remittent fever, treats the patient with calomel and quinine, and a considerable improvement follows, including a reduction of temperature. But forthwith the typhoid symptoms supervene, and the patient, having been already enfeebled by his wrestling with the malarial fever, is in no condition to encounter the next enemy with advantage. It would seem that the "*bacillus ilio typho-phyton*" is an entirely different bird from the *bacillus malariae*, since what is poison to one appears to be meat for the other. Uncomplicated typhoid is here, as elsewhere, a comparatively mild and manageable disorder.

The Central Ohio Medical Society, a vigorous institution, meets here monthly. I hope to furnish you, hereafter, with some account of its doings.

November 8, 1883.

COLON.

ST. PAUL, MINNESOTA.

A THREE weeks' sojourn in this city has given me exceptional opportunities of observing medical matters here and in the more youthful city of Minneapolis, only ten miles distant. To one whose life has been mostly spent in the settled and dignified cities of the East and South, the rapid growth of the

newer Western communities presents itself as something quite extraordinary. Since my arrival here, I have conversed with a number of persons who are still in the full vigor of life, and who yet remember when this city of one hundred thousand inhabitants, with its electric lights, its telephones, its eight-page newspapers, and its prospective million-dollar hotel, was but a trading-post of two buildings. The prominent men in political, mercantile, or professional life are nearly all under forty years of age. As examples drawn from the medical profession, the most widely known gynæcologist in the Northwest is hardly over thirty-six, the best surgeon is less than thirty-two, the most successful oculist is certainly under thirty-five, while the mass of the profession is probably not out of the twenties. As in the medical, so in the legal profession and in mercantile life, the young men are at the front, and it looks mightily as if they intended to stay there. Already I have heard "old" physicians of thirty-five talking of giving way in a few years to the younger men who are coming to the fore and will soon supplant their youthful seniors!

In the East one often consoles himself, when things go awry, with the comforting fiction that the West is a wild place, where all sorts of wickedness run riot in a bold and law-defying course, and that one must "rough it" there, and be one of the *hói polloi*, if one desires to get along at all. So far as St. Paul is concerned, nothing is further from the truth. Everything that can be desired in the way of culture and comfort can be had here, and it is generally paid for at pretty lavish rates, considered from the economical stand-point of the East.

The medical profession of St. Paul is, taken altogether, the most harmonious in sentiment and helpful in mutual service that I have found anywhere in this country; and I can establish the claim of being somewhat of a traveller. I have had the opportunity of meeting all the regular physicians of the city, with very few exceptions, at a reception given by one of the most prominent and successful men here, and have had quite abundant opportunities otherwise of judging. Nothing can exceed the courtesy with which they treat each other. Ethical questions seem to disturb them very little, because most of them observe the strictest ethical propriety in their professional relations. Some of the specialists, I am told, did adopt questionable means to bring them into notice, but the "Oculist and Aurist" sign disappeared after a little coaxing. Personal feeling is kept entirely in the background, and no evidence of it ever crops out publicly. Even in the placid professional life of Philadelphia the personal element is more pronounced than here. This does not mean that the medical men here are a weak set, who get along peaceably for lack of self-assertion. Far from it. In physical, mental,

and doubtless in moral attainments, the St. Paul physicians compare very favorably with the profession in any of the large cities of the country.

At the last session of the Minnesota Legislature, a medical bill was passed creating a State Board of Medical Examiners. The law is modelled after the Illinois and West Virginia laws, and goes into effect on the 1st of next January. The quacks who are threatened by the law are preparing to move farther West, or perhaps back to the more tolerant East.

In the cities of St. Paul and Minneapolis very stringent health ordinances exist relating to the notification of infectious diseases. In some cases neglect on the part of the physician has resulted in arrest and fine. Houses in which smallpox, diphtheria, or scarlet fever exist are placarded by the health department, and public funerals in cases of infectious diseases are prohibited.

The State has a well-organized Board of Health, whose work compares very favorably with that of similar organizations elsewhere.

At the last meeting of the Ramsey County Medical Society,—which is the St. Paul branch of the State Society,—Prof. C. A. Wheaton exhibited a patient upon whom he had performed amputation at the hip-joint for necrosis of the femur. The removed bone was also shown, and was the most beautiful specimen of the sort I ever saw. After the relation of other cases, Dr. Schulin read a very excellent paper on the use of jequirity in granular lids. The author's results, after considerable experience with the remedy, agreed with those obtained by De Wecker, Sattler, and others.

The Minnesota College Hospital is in advance of most of the larger Eastern schools in insisting upon a preliminary examination and a three years' course. The class is moderate in size,—between fifty and sixty,—but seems to be composed of good material. The Faculty is composed almost equally of St. Paul and Minneapolis men, and is mostly made up of well-informed men and good teachers. In due time the weaker elements will disappear, and be replaced by others better qualified. The hospital facilities are excellent, and the institution deserves, as it will doubtless achieve, success.

The social qualities of the medical men here are doubtless remembered with pleasure by the members of the American Medical Association who attended the meeting of last year. I can echo the sentiment I then heard so generally expressed, that the St. Paul physicians are "good fellows, all." I never spent three pleasanter weeks in my life than those which gave me the opportunities to make the observations just recorded.

CORSAIR.

CORRESPONDENCE.

LONDON LETTER.

THE session is quietly progressing, and nothing is going on unusual or surprising. The ordinary number of peers are ill, and the usual array of medical names are found in attendance upon them, as the columns of the daily press tell us. The Archbishop of Canterbury has had an operation performed upon his rectum, a matter which it seems "it was requisite for special reasons should not be misunderstood or misrepresented." I suppose if the commander-in-chief of the British army happened to require an operation for stricture, there might be found "special reasons" why it should not be "misunderstood or misrepresented." I was brought up to regard the maladies of patients, especially those connected with what was the one cloacal opening of the lower forms of life, even when divided into two, as strictly matters for privacy. But *tempora mutantur*, and—must it be added?—*nos mutamur in illis*. It is a strange tale of upheaval of old notions if it is so. What makes it still more curious about the primate's illness is, "Those most interested wished that the whole truth should be known, and that there should be no secrecy in the matter." If publicity is desired by those most interested, of course no secrecy on the part of the medical attendant could be either desired or insisted upon; but if "those most interested" in one case desire publicity, in that case it is breaking down the old rule, and makes the old-fashioned secrecy, instead of being, outside all question or consideration, a matter of course, now a matter on which the patient and his family must be formally consulted in such cases. The tendency will be to embarrass the relations of those exalted personages who figure in the newspapers, and their medical advisers. Fancy, if an elderly nobleman were to be operated upon for an anal fistula, his surgeon having to ask, "How many of the details would your lordship like to have inserted in the published report,—the mere length of it, or more minute details as to the manner of operation and how your lordship bore it?" Yet it would seem that this is what we are in some danger of coming to, if the desire for publicity becomes too strong for decency: it has some time ago overstepped propriety. The present primate has been rather weak in his parade of his position, but this ridiculous folly will simply provoke contempt. It is to be hoped, out of respect for his office, that he personally, though one of those most "interested," did not desire "that there should be no secrecy in the matter."

I have had occasion from time to time to subject matters connected with the British Medical Association to criticism which some might regard as sharp, and a smaller number

even hostile; but it is now my pleasant duty to relate something of it which is decidedly meritorious and calculated to be of the very highest utility. Some time ago the project was mooted of utilizing the vast numbers of the Association for collective investigation,—an excellent project. The waste of experience going on was felt to be a reproach. Hitherto observations and generalizations have been mainly the work of individuals rather even than of committees. “The advantages of this method are obvious, and it must continue a great means of advancing medical science; but it has the disadvantage of leading to a sort of imperialism or Cæsarism, and hence to the domination at particular periods of the dicta or dogmas of certain persons, and that prevalence of passion, that blind adoption of shifting views and modes of treatment, which tends much to repress thought and stifle inquiry.” Consequently, it was thought that “the collection of information upon a grand scale, which has the double effect of stimulating many investigators and of drawing facts from many sources, not as a substitute for, but as an addition to, individual research, has long been felt to be one means of meeting the difficulties and disadvantages just mentioned. It was obvious that the British Medical Association, with its enormous force of members, its *Journal*, its organization of branches, its funds gathered by good management and economy, afforded an opportunity such as had never existed before of doing it.” So a committee of some good men, metropolitan and provincial, was formed, who set to work. Addresses were given by Sir William Gull, Sir James Paget, and Professor Acland, giving great encouragement to the promoters of the scheme; “but the greatest encouragement of all has been the number of carefully-filled cards which have been received, especially on pneumonia, from the members of the Association living in the various districts of the country. For this shows not only a widely-extended perception of the need of the work, but the willingness of a large number to assist in carrying it out.” It was soon found, indeed, that the *Journal* must be relieved of much of the material, and a special report be issued.

As to the communicability of phthisis, a certain proportion of answers, amounting to the respectable total of two hundred and sixty-one, tell of this having been observed, while a smaller proportion, one hundred and five, actively negatived the view. Now, when so many men have observed a fact (if fact it be) so opposed to their professional teaching, even the stoutest advocate of the old view may be pardoned if his confidence in that view is a little shaken. That cases of communicated phthisis, distinct and unquestionable, can never form a large proportion of the total number of cases of the common malady is probable enough. Nor is, perhaps, the

scare on the subject in Germany following upon Koch's discovery of the bacillus of tubercle altogether without some permanent value in all probability. Bacilli are found in hordes in softening tubercle, I am credibly informed; and one of those most interested in the subject offers, with much complacency, to make myself the victim of phthisis if only he may place a sufficiency of the little villains in my veins: still, there is the family predisposition to be borne in mind. The contagiousness of pneumonia, of which there is some evidence, “striking if scanty,” is an aspect of that malady distinctly novel. The report on the treatment of acute gout will be interesting and instructive, if only negatively instructive. As to chorea, it was found, “with reference to *nervousness and nervous affections in the families of those suffering from chorea*, the returns supply information which strengthens the general opinion that the disease is especially apt to occur in families in which other nervous affections are common.” Arsenic seems to have been one of the main agents used in the treatment, with the result “varying success,” while sulphate of zinc seems often “to have been of striking utility.” As to acute rheumatism, the prevalence of fashion in the treatment of disease is demonstrated by the fact that salicylate of soda was the drug in most favor. From the report on diphtheria it would appear that sometimes the throat is comparatively little affected while the kidney-complications are proportionately severe. This fact certainly tends to show (to my judgment at least) that diphtheria is allied rather to scarlatina than to croup, and falls in with my personal experience in the past. A proposal to inquire into the association betwixt whooping-cough and measles is also suggested.

The subjects at present before the Association are—1, acute pneumonia; 2, chorea; 3, acute rheumatism; 4, diphtheria (clinical); 4a, diphtheria (sanitary); 5, syphilis (acquired); 5 a, syphilis (inherited); 6, acute gout; and a great deal of very useful information will probably be elicited on the various topics. How far the information obtained by collective investigation will harmonize with or clash with the opinions formed by individual observers remains to be seen. It will certainly stimulate those who are ambitious of being regarded as leaders in medicine to examine their views very closely when they see what views find acceptance with the profession, as indicated by these returns; while doubtless on the other hand many isolated facts will be gathered together, gleaned as it were by this collective inquiry, which will furnish material for comprehensive thinkers. From both of which much good will accrue and much thought be excited throughout the ranks of the profession.

An address recently delivered at the annual meeting of the Metropolitan Branch of the

British Medical Association, by Dr. Charles J. Hare, the President, and late Professor of Clinical Medicine in University College Hospital, has been reprinted by request. It is entitled "Good Remedies out of Fashion," and throws a most interesting light upon the change which has gone on in medicine during the last generation. Dr. Hare seems rather oppressed by the number of new remedies advertised for the liver and ending in "in." Then, deprecating the criticism of "younger members of the profession, who will look upon these things as some strange and new doctrine, or as prejudices clinging to me from my earlier days, or as antiquated customs of which the progress of modern science has shown the futility or wrongness," he plunges in. First he considers the subject of *milk*, now so largely given in all hospitals. Five-and-twenty years ago it was difficult to see a patient who had been in the hospital a few hours before one's visit who had not been already, and almost as a matter of course, put on three or four ounces of brandy by some resident assistant, a fashion against which he set his face at the time. He points to the fashion on the subject now, when alcohol is being tabooed very extensively. He collected statistics from our leading hospitals as to the amount of alcohol purchased then and now. At St. Bartholomew's Hospital, for instance, in 1852, wine and spirits cost £496; in 1862, £1231; in 1872, £1446; and in 1882 the sum of £953. The variation in other hospitals has been much the same. Milk has grown in demand: at St. Bartholomew's, in 1852, milk cost £684; in 1882, the sum of £2012; at Guy's, £236 and £1448 respectively; and at the London Hospital, £426 and £2427 respectively. These figures carry with them much material for thought and reflection. Yet in these hospitals there are many patients who are little more than broken-down drunkards. In a rural population probably less alcohol, even, would be given under like maladies.

Then he proceeded to speak of "Emetics." Not long ago he saw in consultation a case of suffocative bronchitis, and advised an emetic. The comment was, "Why, I never gave an emetic to an adult in all my life." It makes one feel a strange sensation of wonder to conceive where this medical man had got his college education, and what kind of an experience he had had in professional life. Dr. Hare then gives a sketch of the almost magical effects of an emetic in such bronchial condition. He then alluded to the composing effects of an emetic in delirium tremens. He then referred to a case where a corpulent lady of 34, who suffered from dyspeptic pains, and who was made worse by food, was relieved by vomiting, especially as to the nausea and headache. The vomited matter was always intensely acid. He soon satisfied himself that there was no organic disease of the stomach, and gave a scruple of ipecacuanha powder.

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After this she vomited freely a quantity of ropy mucus, intensely acid, and after that was *well!* In such cases he thinks there is present much morbid acid in the gastric follicles; a little was got rid of by each act of vomiting; but the emetic, followed by draughts of warm water, removed all the excess of acid, and so cured the patient.

He then spoke of the use of opium in "needless, useless coughing;" but, personally, I fear that a man with less than Dr. Hare's judgment might easily reduce the coughing to the stillness of death, if he followed his practice without the necessary discrimination. Used as Dr. Hare proposes, there is much to be said for such use of opium; but wielded indiscriminately I shudder at the consequences. Then he spoke a word for purgatives, now too much avoided from the fear of producing "debility." This word, he says, is "the *bête noire* of the present medical world." Then he quotes Byron: "Talk about champagne, there is nothing in the world cheers your spirits up like a dose of Epsom salts." Then a word or two followed about mercury as a cholagogue, and its great utility in melancholy,—the "black bile." Then follows a eulogium of the old attention to the *primæ viæ*, so little understood, and therefore so little attended to, at the present time. More aperients would mean fewer tonics, he opines. "Remove the cause, and the effect will cease," he holds, "and in many cases where it is little suspected, the cause of the varied symptoms lies in the morbid secretions in the *primæ viæ*, which have been long, perhaps, poisoning the system. If these be removed, there is, in a vast number of such cases, strength and 'spring' enough in the constitution to set all to rights without the aid of anything, or with the aid of but little in the way of tonics; and in many cases with the removal of the intestinal irritants the 'weakness' and 'debility' rapidly vanish." If this is not the old hydra-headed monster 'humoral pathology' rampant as ever, what is it? Ye men of the dead-house and the microscope, ye clinical men of stethoscope and pleximeter, do ye hear the prophet of the past speaking to you? Do ye heed? "Such fluctuations and such changes take place in opinion and in practice, in beliefs and actions, that it almost seems as if the results of the experience of ages, instead of being engraven on the rocks, were written on the sands, and that the wave of fashion, sweeping over these, at once obliterated the inscriptions which ought to have been indelible." Then follows a consideration of "blood-letting." Once no hospital was without its cupper, who visited daily to carry out the instructions of the physicians and surgeons. Where is he now? Gone, it is to be feared. Yet Dr. Hare thinks he might be useful still. Gone "with the dodo and the ichthyosaurus!" Then as to leeches. They have gone too. In 1842 the cost of leeches at

St. George's Hospital was £141; in 1852, £38; in 1862, £5; in 1872, £2 14s., and in 1882, £2 13s. 6d.; while at the London Hospital leeches cost in 1839, £495; in 1842, only £180; and in 1872, £5 10s. A once large leech-importing firm now do not think it worth while to keep any account of leeches, their sale not amounting to fifty yearly. Dr. Hare eschews any intention of advocating a return to the old days of "the almost indiscriminate use of bleeding;" but the abuse of a thing is no argument against its use. He then showed a friend of his who in 1829 had a fit, for which he was bled repeatedly with good effects. After a time the fits returned, and he was bled again, and freely, and leeches too. Yet, so far from debility being produced then or since, the gentleman was a very hale specimen of an old man. He told of the good of bleeding in pneumonia; of its almost magical effects in pleurisy. Then the engorged right ventricle came in for its share of consideration, and a graphic picture is drawn of the good effects of bleeding. As the black, tarry blood begins to flow at first only with the greatest difficulty, then more freely, the relief is almost beyond conception. As I read the description, the words of my father and others of the past generation seem to be once more ringing in my ears with a quite familiar sound. Then "the choked-up heart is set free."

Dr. Hare disclaims in this any "fancy picture," and appeals to the senior portion of his audience for the corroboration of his words. He then tells of a case of a girl of fourteen, who had head-symptoms from over-study. Leeches gave relief, so that she could leave her bed. During thirteen weeks she was ill, and in that time was seen by three of the most eminent F.R.C.P.s, not one of whom gave a thought to leeches. Bromides were given, with some counter-irritation. At last Dr. Hare determined to do his own way. "On February 17, therefore, five leeches were again applied to one of the temples, and somewhat later the same number was repeated. The first of these applications gave the first relief the patient had to the coronet of pain which had been so long her constant companion; but, though greatly relieved, it was not cured. The second of these applications (the fourth of the series) entirely removed it, and the girl, once more bright and cheerful, returned to school, and has not since been an hour absent from her duties." Another picture, most forcibly drawn, was given of the effect of leeching in acute meningitis. Dry cupping came in for its word in the retrospect, and then the doctor made his *congé* and took his leave of his hearers, who seem to have listened to the voice of one of our master-spirits long ago gone over to the majority, who had come back to tell us that all our recent advances have not been progress. There is much in the past which has been neglected and almost forgotten which is well

worth digging up, and "voices from the dead" will, it is to be hoped, from time to time waken us up as a not unnecessary or undesirable attention. Are we not nodding in a complacent, self-satisfied snooze very often, even in what we hold this wide-awake age? Dr. Hare, and those who think with him, would seem to be of some such opinion.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THE eleventh annual meeting of the American Public Health Association, held at Detroit, Michigan, which closed November 16, was one of the most successful in the history of the Association. The subjects discussed were practical, and the majority of the papers read were of more than average value. Business was dispatched with commendable speed, owing to an efficient Executive Committee, and the duties of presiding officer were performed with dignity and grace by Dr. E. M. Hunt.

The proceedings of the first day comprised papers on the Texas Cattle-Fever, by Dr. Salmon, of the Agricultural Department; on Swine-Plague, by Dr. J. M. Partridge, of Indiana; and a report on Actinomycosis in cattle at the Chicago stock-yard, by Dr. William T. Belfield, which was accompanied by microscopic specimens of the appearance of the diseased tissues, and of the fungus *actinomycosis*,—the cause of the disease. Dr. Salmon's paper was very elaborate, and considered the question very fully, whether the disease called "Texas fever" was really a specific disease of cattle, or whether a number of widely-different affections were included under this name. The conclusion arrived at, after a thorough sifting of the evidence, was that Texas fever is an acute, contagious, specific disease of cattle, that it is endemic in Texas and other parts of the Southern United States, and that it may be, and is frequently, spread by contagion to other parts of the country. The paper deserves the careful study of all sanitary officers and stock-raisers. The report of Dr. Belfield on actinomycosis is of especial interest as being the first exact contribution to our knowledge of the disease made in America. As actinomycosis is communicable to man, and is invariably fatal in the latter, the value of his observations is apparent. The common name for the disease in cattle is "swell-head," or "lumpy mouth," from the characteristic lesion, a series of tumors of the upper jaw, which on examination with a microscope show a fungus consisting of club-shaped rods radiating from a common centre. The af-

fected animals lose flesh, and eventually die with symptoms resembling pyæmia.

The discussion on malaria was opened with a paper on its etiology by Dr. G. M. Sternberg, U.S.A. This paper was followed by equally elaborate ones from Surgeons A. A. Woodhull and Charles Smart, also of the army. Dr. Sternberg's researches, statistical and otherwise, showed that the cause of malarial fevers was not produced in the absence of heat, moisture, and vegetable decomposition. The intimate nature of the cause he did not attempt to elucidate. Dr. Woodhull's views were nearly similar to those arrived at by Dr. Sternberg, while Dr. Smart struck a more practical chord by showing that malarial diseases could be caused by polluted drinking-water, and urging the necessity of more frequent and thorough analysis of drinking-waters, in order that the immediate cause of malaria might be discovered.

The discussion revealed a singular want of definiteness of opinion as to the nature and cause of malaria among those taking part in the debate. Several members, however,—among them Dr. Rohé, of Baltimore, Col. George E. Waring, of Newport, and Dr. Wight, of Detroit,—pointed out the relation of the motions of the ground-air and ground-water to the spread of malarial diseases.

In the evening a brief address of welcome, full of good sense and good humor, was delivered by the Governor of the State, who was followed by Dr. Brodie, of Detroit, and Dr. John Avery, President of the Michigan State Board of Health. The President, Dr. Hunt, then delivered his annual address. Dr. Hunt sketched briefly the origin and progress of the Association, giving a concise account of the advancement of sanitary science since its organization, and the Association's share in producing the advancement. The address was scholarly in matter, eloquent in manner, and gracefully delivered. Although occupying over an hour in delivery, it was listened to with close attention by the large audience present.

The inevitable paper on Yellow Fever appeared on the second day's programme, but was quickly disposed of, and the Association proceeded to the discussion of more profitable matters. The Adulteration of Foods was discussed by Drs. W. K. Newton, of Paterson, New Jersey, Prof. A. R. Leeds, of Hoboken, and Profs. Kedzie and Vaughan, of Michigan. The only thing clearly brought out was that laws against adulteration were of comparatively little use, because they were not properly enforced.

An excellent paper was read on the Hygiene of Schools, by Dr. C. J. Lundy, of Detroit. It was discussed by Dr. A. N. Bell, of Brooklyn, and Dr. Jones, of Massachusetts.

In the evening, addresses on Physical Training were made by Prof. J. Madison Watson, of New Jersey, and Prof. Sargent, of Cam-

bridge, Mass. The advantages of the various systems of physical culture were clearly explained, and its importance as a part of the school curriculum was strongly urged.

Dr. James E. Reeves, Secretary of the West Virginia Board of Health, delivered an excellent address on the Usefulness of State Boards of Health in Guarding the Public Welfare. It presented in a clear light the importance of sanitary organizations, and a becoming pride was expressed by the speaker in the advanced position held by his own State. The feature of the West Virginia law regulating the practice of medicine was explained, and an exposure of what looks like a bit of very sharp practice on the part of one of the medical schools of the Southwest was made to give spice to the entertainment. Dr. Reeves apparently has little hope for reform on the part of those States lying in proximity to the borders of his own State, for he says, "Little West Virginia, nestled in the mountains, and looking into the near future for the coming time when her inexhaustible stores of native wealth shall be unlocked to hundreds of thousands of busy laborers, has proudly acknowledged allegiance to the goddess Hygeia, under whose health-inspiring banner she has already won substantial victories and benefits for the saving of her citizens. But, while flushed with the stimulus of her triumphs, she turns in sadness and with outstretched arms and pleading voice to her elder sisters by whom she is immediately surrounded,—Ohio, Pennsylvania, Maryland, and the dear old Mother State,—and says to them, 'How long, oh, how long shall the land which the Lord thy God giveth thee be the *Paradise of quacks*?' "

The questions of sewage removal and final disposal, the ventilation and proper construction of sewers and water-closets, were discussed by Drs. J. H. Raymond and Bell, of Brooklyn, Mr. R. Herring, C.E., of New York, Dr. Oldright, of Canada, Col. Waring, and others, who by study and experience were able to contribute to a more thorough knowledge of the subjects under discussion.

The Increase of Insanity in the United States was the subject of an able paper by Dr. Foster Pratt, of the Michigan State Board of Health, read as the closing paper of the meeting. The author showed that the percentage of insane of foreign birth in this country largely exceeded the percentage of the native insane. He advocated the passage of laws to prevent the immigration of insane persons, paupers, and criminals from foreign countries. Resolutions praying Congress to pass such laws were adopted by the Association.

The officers elected for the current year are—

President, Dr. A. L. Gihon, Medical Director U. S. Navy.

First Vice-President, Dr. James E. Reeves, of West Virginia.

Second Vice-President, Hon. Erastus Brooks, of New York.

Secretary, Dr. Irving A. Watson, of New Hampshire.

Treasurer, Dr. J. B. Lindsley, of Tennessee.

The next meeting of the Association will be held in St. Louis in October, 1884.

The local committee, under the chairmanship of Dr. Wm. Brodie, made it pleasant for every one by their attention to the comforts of the visitors.

CORSAIR.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting of the Academy was held, November 15, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The death of the late Dr. J. Marion Sims was announced by the Statistical Secretary.

THE PRESIDENT made the following remarks:

By the death of Dr. Marion Sims the Academy of Medicine, the profession of this city, and, I may well add, the profession of the country have lost their most original and brilliant genius in the department of surgical gynecology. This will be conceded by all. Had circumstances forced him to equal activity in other branches of surgery, his fertility and promptness in practical suggestion, his intuitive power of conception of new means to secure any desired result, his endowment of invention and wonderful mechanical adroitness, would undoubtedly have given him equal eminence in all its departments. No one can be compared with him in his own sphere, in which he achieved such great distinction, except the late Sir James Y. Simpson. An intimate relation with both for many years may, perhaps, justify me in saying that there were very many points as to their intellectual and moral qualities which were strikingly characteristic of both. These resemblances were much more numerous than the points of contrast. In the future the greatest fame of one will rest on his courage, and I may even say audacity, in successfully introducing anæsthetics to relieve the agonies of parturition; in the other by his genius in devising new methods of physical exploration and new surgical procedures which effect cures of lesions which before could neither be correctly diagnosed nor successfully treated. In thus alluding to the greatest achievements of the two, I should also add, both were incessant, zealous workers, who for many years were constantly making positive contributions to our science and our art, many of which would alone establish their claim as great men in our profession; the former perhaps adding more to our scientific literature, and the latter more to the advancement of our art. Neither of them was reluctant to have his good work appreciated. To-

morrow morning, I doubt not, every Fellow of the Academy whose engagements will permit will be present at the funeral services of our late most eminent associate. The chair, in accordance with our by-laws, will designate Dr. T. Addis Emmet to read a memoir at the first meeting of the Academy in January.

TYPHOID FEVER IN NEW YORK.

Dr. FRANCIS DELAFIELD read the scientific communication of the evening, with the foregoing title. The statistics given were based on the cases treated in the several hospitals of this city during the past few years. By the tables of mortality of the Board of Health he had learned that for many years' past there had been an annual mortality from typhoid fever in the city of New York of from one to two hundred. From 1863 to 1866 the mortality ran up as high as five hundred to six hundred yearly during the time when typhus fever was also prevailing in the city. Since that time the yearly mortality had been from two hundred to four hundred; in 1879 it was one hundred and seventy-eight; in 1881 it was four hundred and forty-six; up to October 1, 1883, it had been two hundred and seventy-four. Most of the cases occurred in the latter part of summer and in early fall.

From the 1st of 1877 to October 1, 1883, thirteen hundred and five cases had been treated in the city hospitals. The percentage of mortality for these several years had been 27, 20, 30, 22, 23, and 26, respectively. Most of the cases were in adults between twenty and thirty years of age. But few children were received at the hospitals. There were many difficulties in the way of getting at the etiology.

At the autopsies the regular lesions, more or less marked, existed. The solitary and the agminated glands of the small intestines had been swollen, converted into ulcers; adherent sloughs were present, or the ulcers may have been cleaned off. The large amount of infiltration which occurred in some epidemics was not present. Perforation with peritonitis had occurred in but a small number of cases; the colon was but seldom involved, and in these the enlargement and sloughing of the solitary glands was marked. In one case multiple new growths of lymphatic tissue, with ulceration, occurred in the stomach; the mesenteric glands were swollen in a degree corresponding to the intestinal lesions. When unusually swollen, a little fibrin was present over the gland, and in one case the peritonitis had become general. Suppuration occurred in two cases. The spleen was soft and usually enlarged. In the case of a boy eight years of age it had ruptured, and hemorrhage had taken place into the peritoneal cavity. Inflammation of the colon existed in several cases and produced dysentery. In one the lower two-thirds of the colon were coated with fibrin. The liver was often enlarged.

Suppuration of the parotid did not occur. The kidneys showed swelling and degeneration of the epithelial cells, corresponding with the appearance of albumen in the urine, and sometimes of casts, during life. Flabby heart with degeneration of muscular fibre was present in but a few cases. The lungs were the seat of a variety of changes, as, congestion of the larger bronchi, in a few cases severe bronchitis and broncho-pneumonia, lobar pneumonia in two cases; a moderate degree of hypostatic congestion in the posterior portion of the lung was common. There was characteristic granular and waxy degeneration in the voluntary muscles, especially those of the anterior abdominal walls, in only a moderate proportion of the cases.

These notes were based upon one hundred and two cases of undoubted typhoid fever which had occurred in the hospitals during the past five years. During this time a number of cases of fever simulating that of typhoid had occurred. Of the one hundred and two cases there was a distinct prodromic period in only eighteen; languor, headache, indisposition to mental or physical labor, loss of appetite, constipation or diarrhoea, irregular chilliness, in some bronchitis. This period had varied from four days to several weeks. The invasion in thirty-seven out of the eighty-three cases in which the character was learned was a chill on the first day, either of a mild or more severe type; sometimes the chill was repeated, and was followed by febrile movement, often accompanied by headache, vomiting, and nose-bleed.

Diarrhoea.—Diarrhoea, accompanied by fever and sometimes by headache and epistaxis, was one of the first symptoms in twenty-five cases. There were forty-four cases in which diarrhoea was one of the first symptoms, in three of which blood was mixed with the passages during the first few days. Headache and fever marked the onset in fifteen, and in six bronchitis was a prominent feature during the first week. Pain over the abdomen, or in the right iliac fossa, existed in many of the cases. For various reasons, the record of the temperature could not be given in many cases for the first week. In those in which it was taken it did not follow the regular course which certain authors had laid down in the books. In some there was a morning chill, and afternoon fever and sweating; in some there were falls of the temperature, lasting for from six to twenty-four hours, during the first week. In the second week the temperature approached more nearly to the type of a continuous fever, with moderate morning remissions; in some the remissions were more decided; in some the morning temperature was the highest; in some it fell to normal by the fifteenth day, and convalescence began; in some the disease continued, the temperature again rising after a few hours. When a fatal termination took place in the second week

the temperature reached its highest point a few hours before death, or, if sooner, it fell to 101° or 100° just before death. The third-week temperature-record was much like that of the second. In the fourth there were more marked morning remissions. In some instances the temperature became lowered for a day or more, and then again rose. The height of the temperature was usually in proportion to the severity of the disease.

The pulse during the first week was regular, full, from ninety to one hundred, becoming more rapid and feeble in the second and third weeks. As a rule, the more rapid the more feeble the pulse. A rapid pulse was usually an unfavorable symptom. If a slow pulse was accompanied with cerebral symptoms, the case closely resembled cerebro-spinal meningitis.

The appearance of the patients was that usually seen in typhoid cases,—dulness of expression, dusky face, flushed cheeks, sluggishness of mind, tongue coated with white fur in the centre, afterwards becoming yellow-brown, sometimes becoming fissured. In some cases the tongue was comparatively clean; when it began to grow moist, convalescence might be considered as approaching. Active delirium was present in a number of cases, and was an indication of a severe form of the disease. Diarrhoea was present in eighty-two cases, beginning early in forty-four; in fifty-one it continued throughout the course of the disease. There was continuous constipation in eighteen cases, often associated with a marked degree of tympanites. The eruption was well marked in forty-four cases, and it had probably been overlooked in others. It had been more constant during the past autumn.

Complications.—Hemorrhage from the bowels took place in twenty-three cases, and was the direct cause of death in six. In two cases there was constant running away of blood from the rectum in the sixth week, as in cases of cancer, but no malignant disease was present. When hemorrhage occurred it was usually followed by a fall in the temperature. Only nine of the patients in whom hemorrhage occurred recovered. A pustular eruption of the skin occurred in one patient, but produced no other symptom than discomfort. Suppurative inflammation of the middle ear and discharge of pus in five cases; severe pharyngitis with false membrane in one during the first week; there was a moderate degree of catarrhal laryngitis in a number; bronchitis and a severe type of broncho-pneumonia in twenty-four, in sixteen of which it occurred during the first week. In three cases bronchitis seemed to have been the cause of death, lobar pneumonia in two cases proving fatal; repeated attacks of feeble heart-action and syncope in one patient; peritonitis in four cases, caused by perforation in two; thrombosis of the femoral vein in one; dysentery

after convalescence in five, proving fatal in one.

In one case convalescence began on the sixteenth day; in four, on the eighteenth; in six, at the end of the third week; in fifteen, in the fourth week; in twelve, in the fifth; in four, in the sixth; in four, in the seventh; in one, in the eighth; in nine, in the ninth; and in one case, in the tenth week.

There were well-marked relapses in seven cases. Out of the one hundred and two cases, thirty-four proved fatal; in eighteen, death seemed to be due to the typhoid disease. In the fatal cases the temperature usually ran high, from 104° to 107° , but not continuously so. The pulse was feeble and in most cases rapid.

In mild cases the patients were put to bed and given milk diet. Some of the hospitals employed peptonized milk; some physicians gave some form of alcohol in every case, by others it was reserved for feeble heart-action. Digitalis, convallaria, and caffeine were often employed as heart-stimulants. In some hospitals quinine was given to nearly every patient, in others only to reduce temperature, in others it was scarcely resorted to at all. The general bath of late had been almost entirely abandoned in the hospitals. Cold water, in the form of sponging or wet sheets, was still employed, more or less, for reducing the temperature. Turpentine, internally and externally, was commonly employed in tympanites. Opium and ergot were employed in intestinal hemorrhage. In diarrhœa, opium, with bismuth or pepsin, and a solution of acetate of aluminum, were mostly used. In one of the hospitals, if the patient was seen early, calomel was given with the hope of aborting the attack. Salicylate of sodium, benzoate of sodium, a combination of carbolic acid and tincture of iodine, with the idea of acting upon the poison of the disease, were seldom used.

THE PRESIDENT directed attention to certain points in the paper which he would be glad to hear discussed, and first called upon Dr. Alfred L. Loomis.

Dr. LOOMIS said that he had been interested to know what definition Dr. Delafield would give of typhoid fever. As the disease had been described by the author of the paper as prevailing in the city of New York at the present time and for some years past, one would hardly recognize the same condition, called typhoid fever, described by Liebermeister and other European writers. Those writers gave typhoid fever a typical range of temperature, gradually rising during the first week, remaining about even during the second, remittent during the third, intermittent during the fourth; as having a characteristic rose-colored eruption, which appeared between the sixth and the tenth day, each spot remaining three days, and then disappearing, perhaps to be replaced by another;

a pea-soup diarrhœa; the disease originating in a specific poison,—that is, from matter contaminated by the excrements of the typhoid patient. Such regularly characteristic symptoms had not been described by Dr. Delafield, nor had they regularly occurred in the cases of so-called typhoid fever which he had seen in the city the past few years.

Dr. F. P. KINNICUTT had examined the few fatal cases to which he had had access in the St. Luke's Hospital with regard to a possible relation between deep ulcers of the intestines and constipation, to which Sir William Jenner had first called attention. He thought that in those few cases such relationship seemed to have existed, and if so it had an important bearing upon the use of laxatives. It was best not to give laxatives by the mouth, but to employ an enema, one of small size, frequently repeated, being preferable to a large one. He was disposed to regard the relapses as due to the remains of the true typhoid poison within the system, rather than to accidental circumstances. His treatment consisted principally of rest in bed, plenty of pure air, a strictly-regulated diet, and medicinal treatment for special symptoms as they arose.

Dr. E. G. JANEWAY quoted the statistics of typhoid fever in New York City for more than a quarter of a century past, going to show that the disease was not increasing out of proportion to the increase of the population, as had been inferred. Typhoid fever was known to vary more or less in different epidemics, as was the case with other infectious diseases, and an atypical form had been described by European authors, and he therefore regarded the fever as it now prevailed in this city as true typhoid fever. The intestinal lesions were similar in the different fatal cases, although they varied in intensity, as did also the symptoms referable to such lesions. It might be difficult in given cases to trace the etiology, but he had often been able to do so, although at first it seemed impossible. To show the numerous opportunities for the germs to become spread, he referred to the case of a man, a peddler, who appeared at the hospital with typhoid fever, having had the symptoms thereof for more than a week, while going about at his occupation and during that time making use of the water-closets in the tenement-houses of the city. An estimate showed that in this manner he had possibly contaminated the water-closets of forty-eight different tenement-houses. In some epidemics the diarrhœal symptoms were more marked, in others constipation; and so of the other symptoms. He had found an eruption in nearly every case during the present fall.

Dr. T. A. MCBRIDE had employed kairine to reduce the temperature, giving it in seven-grain doses until the temperature fell to 101° , and then keeping it at that point by giving

frequently-repeated small doses. When so used, the drug produced no unpleasant symptoms, and was very effective. If omitted, the temperature would again almost immediately begin to rise.

THE PRESIDENT was usually averse to the employment of any drug which would disturb the bowels, but when constipation became uncomfortable to the patient he was in the habit of giving a single dose of five grains of calomel, well rubbed up with fifteen grains of bicarbonate of soda, with excellent results.

Dr. DELAFIELD, in closing the discussion, said that typhoid fever, like other diseases, showed a more or less varied course. The cases were not always of a typical kind, as described by Liebermeister. This author had been the cause of much misunderstanding by giving so positive and definite a course of the affection, such as did not exist in nature. He was in the habit of employing a laxative when constipation existed early in the disease, and with good effects.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held November 14, 1883, GEORGE F. SHRADY, M.D., President, in the chair.

TOOTH IN THE ANTRUM OF HIGHMORE.

Dr. J. A. WYETH presented one of the permanent teeth which he had removed from the antrum of Highmore in a woman 26 years of age, who had suffered from difficulty referred to that locality for about thirteen years, dating from an attack of measles or scarlet fever. A dentist had withdrawn a tooth, from the locality of which pus discharged from time to time for some years afterwards. Dr. Wyeth withdrew two of the teeth, and entered the antrum for the purpose of cleaning it and establishing drainage, when he came upon the foreign body in the form of a tooth. It was the only authenticated case of the kind of which he had any knowledge. He asked the members if they had had a similar experience.

EMBOLISM OF THE BASILAR ARTERY OF THE BRAIN.

Dr. G. L. PEABODY presented the heart and a portion of the brain removed from a man last spring. The patient had signs of heart- and kidney-lesions; had suffered from rheumatism; his mother had died of cardiac disease. He suffered from dyspnoea, cardiac palpitation, headache, anasarca, and a few hours before death became silly, and then very violent, requiring to be placed in the strait-jacket. The urine passed in twenty-four hours diminished to fourteen ounces. He died in a state of stupor. At the autopsy, cardiac hypertrophy and dilatation were present. The mitral valves were markedly thickened, stiff-

ened, and their surfaces rough. There was hemorrhagic infarction in one lung, and, just above, signs of acute pleurisy. The kidneys were the seat of extensive lesions. The parietal and the visceral layers of the pericardium were adherent. The basilar artery was found almost completely plugged with an embolus,—a condition which Dr. Peabody considered very rare. The rest of the brain, receiving its blood-supply through other channels, was healthy. The time of lodgment of the embolus probably corresponded to the time of development of delirium.

Dr. WYETH asked Dr. Peabody what he considered the immediate cause of death.

Dr. PEABODY thought it difficult to answer, for there were several conditions which might have produced immediate death.

Dr. WYETH asked the question because two cases of thrombus of the basilar artery had come under his observation in which death was attributed to anæmia of the pons and medulla, and there were other cases of the kind on record. At the time of the death of one of these patients he was contemplating ligature of the vertebral arteries in a case of epilepsy supposed to be due to miliary aneurism. He gave up the operation, because he feared voluntarily to produce a condition, namely, anæmia of the parts supplied by the vertebral arteries, which in the other case, happening by accident, seemed to have been the direct cause of death. A Liverpool surgeon, however, had tied the vertebral arteries in a number of cases for epilepsy, in some of which a cure seemed to have been effected; others were benefited. In none had evil resulted directly from the operation.

EXOSTOSIS OF THE ETHMOID BONE.

Dr. HERMAN KNAAPP presented the specimen, which had been removed from a woman, 45 years of age, who had suffered from nasal polypi for fifteen years past. Several operations had been performed at different times for removal of the polypi, and lately they had grown very rapidly. Some weeks ago, when the patient first consulted him, one nostril was nearly completely plugged, and the other also largely occupied by the growths. He advised their removal, which was done by Dr. Lincoln, the sittings extending over several weeks. He then said he could go no further. Dr. Knapp removed the tumor, which was pressing the eyeball towards the temple and forward. Its removal was easily accomplished, and in a very simple manner, judging from operations of a like kind done before. No reaction whatever was anticipated. A sharp spoon was employed to remove the remaining accessible polypi, a number of which existed in the frontal sinus. The patient did well for the first twenty-four hours, then began to complain of headache, cerebral symptoms increased, and she died in coma on the fourth day after the operation. At the

autopsy the dura on the right side of the convex surface of the brain was completely infiltrated with pus; the meshes of the pia, and the spaces beneath, were distended with serum, flattening the convolutions beneath. The pathological condition was much less marked on the left side, corresponding to that on which the operation had been performed, and also on the base. The ethmoid cells, and also those of the sphenoid, and of the frontal sinuses which could not be reached during life, were studded with polypi. There was cheesy pus in the sphenoid cavity, which doubtless had existed before the operation and had paved the way for death. The wound at the former seat of the tumor had healed by first intention, and no reaction had taken place. The tumor was found to have developed from the ethmoid, and was of ivory hardness. Dr. Knapp dwelt upon the necessity for removing nasal polypi before they shall have gone on to fill inaccessible cavities, to cause the collection and decomposition of the natural secretions, and have taken on a malignant character. He did not think the fatal result in the present case was at all due to the removal of the exostosis, although possibly this had something to do with lighting up the fire that already existed.

HYDATID MOLE.

Dr. CHARLES HEITZMANN presented a specimen of this nature, which had been expelled at the fifth month of pregnancy, and spoke of its microscopical appearances, saying that he agreed with the view of its true nature entertained by Virchow.

CANCER OF THE BREAST.

Dr. A. G. GERSTER presented the specimen, which had been removed from a woman who first appeared last spring at the German Dispensary. She had given birth to and nursed nine children. There was a slight bloody discharge from the nipple, but the gland was in no other respect affected. There was no sign of enlargement of the lymphatics in the axilla. He suspected cancer, but the patient would not submit to an operation, and the case was watched by his assistants until his return in the fall, at which time, they said, the condition was similar to that which had existed in the spring. On careful examination, however, Dr. Gerster found enlargement of the axillary glands, and removed them with the breast. This was the third case of the kind which he had seen in which the disease of the breast consisted only in a sanguineous discharge from the nipple, while the condition of the axillary glands pointed to undoubted malignant disease. He would call attention to the fact that unless a very careful examination were made, even in the lean patient, slight enlargement of the axillary lymphatics would be overlooked.

AMPUTATION AT THE THIGH FOR STRUMOUS AND PHLEGMONOUS INFLAMMATION OF THE KNEE-JOINT.

Dr. GERSTER also presented the leg which he had removed from a boy on account of the presence of a strumous and phlegmonous inflammation of the knee. Strumous disease of the knee-joint had existed for some time, but, fever developing, a physician was called, who regarded it as of rheumatic origin, and poulticed the knee, with the result of producing phlegmonous inflammation. The inflammation extended well up on the upper third of the thigh, and made it necessary to perform amputation. On account of a want of sufficient healthy tissue, a part of the flap was taken from the phlegmonous integument; nevertheless the patient made an excellent recovery, and the wound healed mostly by first intention. Dr. Gerster attributed this result to the use of a strong solution of bichloride of mercury, 1 to 500, which probably killed the germs of disease.

CANCER OF THE ŒSOPHAGUS.

Dr. H. K. HENSCHEL presented the specimen, which had been removed from a man 73 years of age, who had suffered for over two years with eructations and other dyspeptic symptoms, although not of a severe nature, until he became unable to swallow solids. Later, difficulty was experienced in swallowing liquids. There had been increasing dullness over the right side of the sternum at a point opposite that of the obstruction in the Œsophagus. The patient lost a great deal of flesh. After the passage of a bougie he spat up two clots of blood, and was then improved, gaining twenty-five pounds in flesh. But this was only temporary. A few days before death, symptoms of pleurisy developed at the point of dullness over the sternum, fluid exudation appeared in the entire chest, the patient became unconscious, and died. A large cancerous ulcer was found in the Œsophagus, which had ulcerated into the lung, and into which and the pleural cavity the contents of the stomach had entered by regurgitation and partially digested the tissues with which they came in contact.

AN ENORMOUS HEART.

Dr. B. ROBINSON presented the heart of a man six feet four or five inches tall and of large proportions, who recently died in the St. Luke's Hospital. He had suffered for several years with dyspnœa and other symptoms which might be attributable to disturbed circulation. Before death, on one occasion while dyspnœa was very great and the jugular veins distended, fifteen ounces of blood were withdrawn from a vein in the arm. Very great and immediate relief from the symptoms took place, but was not permanent. At the autopsy the heart was found to weigh

about fifty-five ounces, the largest of any which Dr. Robinson had found recorded.

THE PRESIDENT believed that the heart once presented to the Society by Dr. Clark weighed fifty seven ounces.

TYPHOID LESIONS OF THE INTESTINE.

Dr. ROBINSON also presented the intestines of a patient who died in the hospital in a relapse of typhoid fever. The temperature had run a very irregular course. Shortly before death it suddenly dropped to 96.6°. Two perforations of the intestines were found.

Dr. FERGUSON gave the history of a man in whom, at the autopsy, extensive lesions were found in the kidneys, congestion of the stomach and intestine, hypertrophy with dilatation of the heart, fibrinous adhesion between the visceral and parietal layers of the pericardium, and brown induration of the lungs. The man was about 25 years of age, single, addicted to the use of spirituous liquors, and had had rheumatism. His symptoms before death were dyspnoea, orthopnoea, headache, delirium, etc.

DISSECTING METRITIS.

Dr. H. J. GARRIGUES presented two specimens illustrating this affection, constituting the seventh and eighth of a series which had now come under his observation. The histories of the other six cases had been published. The first of the present cases was that of a woman who was confined with her third child at the Maternity Hospital last spring. Uterine and vaginal injections were employed. Some diphtheritic patches were noticed on the slightly-lacerated perineum. The head of the child had been delivered with the forceps. When the mass was discharged, which was about seven by two centimetres, the patient made a speedy recovery. The mass was composed of uterine muscular tissue. The second case was that of a primipara, and the delivery was normal. There was a slight laceration of the perineum. The uterus did not properly contract; the patient suffered pelvic pain. After some days, the treatment being by injections of carbolic acid solution, salicylate of soda, etc., a mass somewhat larger than in the other case, and folded upon itself, was discharged. It was found to be composed of uterine tissue. He had been able to find mention of but two similar cases, besides the ones he had published, and in those two cases the true nature was not recognized. A member of the Society stated, when he presented a former specimen, that certain cases had been reported in an Edinburgh journal; but this was a mistake, as neither Dr. Garrigues nor the gentleman himself had since been able to find such records.

MEASLES FOLLOWED BY CAPILLARY BRONCHITIS.

Dr. J. LEWIS SMITH presented the specimen, and made a few remarks upon the case,

and said that, as the hour was growing late, he would reserve the reading of the paper for another occasion. The child was five years of age, and had had measles, which progressed very favorably until laryngeal symptoms developed, and then, in spite of careful attention and treatment, it sank and died. The voice had been lost, but no pseudo-membrane could be found to account for it; there were the usual signs of capillary and general bronchitis. Dr. Smith remarked that when measles became complicated by capillary bronchitis the cases proved fully as fatal as did cases of scarlet fever.

The Society then went into executive session.

MEETING OF THE ALUMNI ASSOCIATION OF THE JEFFERSON MEDICAL COLLEGE ON THE DEATH OF DR. J. MARION SIMS.

REMARKS BY PROFESSOR S. D. GROSS.

A SPECIAL meeting of the Alumni Association of the Jefferson Medical College was held at the college on Friday evening, November 16, to take action upon the death of Dr. J. Marion Sims, of New York.

Prof. S. D. Gross, President of the Association, in opening the meeting made the following remarks:

Gentlemen of the Alumni Association,—The object of our meeting this evening is no ordinary one: it is to express our grief at the loss of a great and distinguished man, Dr. J. Marion Sims, one of the most eminent members of this Association, as well as one of the greatest ornaments of the school, and at the same time to express our sympathy with his bereaved family.

Dr. Sims occupied a prominent position before the profession of this and other countries for upwards of a quarter of a century. I have known him for a long time, and in his death I feel that I have lost one of the best and truest of friends. He was a man of wide reputation; and I venture to say that the youngest member of the class now attending Jefferson Medical College has heard of the name of J. Marion Sims. Every physician, however obscure, is familiar with his labors, his skill, and the benefits he rendered to the profession. It is to give expression to our feelings at the great loss we have sustained that we are assembled here this evening. Six years have elapsed since we met in this room to take action upon the death of Dr. Washington L. Atlee, a man whose name is distinguished as one of the founders of gynecology in this country; and only about a year and a half ago we gathered here to express our grief at the loss of another great man, one not a graduate of the school, but a member of the Faculty of the college, Prof. Joseph Pancoast, a man whom

we all loved, and whose memory lives after him. Now we meet to do honor to the memory of Dr. Sims.

Dr. James Marion Sims was a native of South Carolina, where he was born in 1813. His early education was received at Charleston, in the medical school of which he was graduated in 1832. He came to Jefferson College in 1834, and took his degree the following spring. He settled in Montgomery, Alabama, and soon after he met with a large number of cases of vesico-vaginal fistula, chiefly among colored women. As their condition at that time was generally considered hopeless, his sympathy was excited for them, and he set to work to devise some means for their relief. In consequence of representations made to him, he determined to establish a private hospital for the treatment of such affections. The hospital contained sixteen beds, and in it he performed a large number of operations, most of which were perfectly futile. But he persevered, and he was not satisfied until in 1848, when, having had his first success in the relief of vesico-vaginal fistula, he had achieved a great triumph. Operations of this kind had been practised before in different parts of the world, but these operations were not based upon any well-founded principles; and it was only after long study and perseverance that he was able to lay down the correct principles for the successful treatment of this distressing malady. There was an incident in his life that I must here refer to. A lady had the misfortune—or the good fortune, as it turned out for the interests of scientific progress—to fall from her carriage and dislocate her womb. In order to reduce it, Dr. Sims placed her upon her knees and elbows and restored the dislocated organ, and to his surprise he saw the vagina remaining widely distended. This was a revelation to him, which led him to adopt this posture in his future examinations and operations, which is universally known as Sims's position, and it also led to the invention of the Sims's speculum, in connection with which his name will always be known. The operation for vesico-vaginal fistula has now been performed thousands and thousands of times in all parts of the civilized world, all based upon the principles originally enunciated by Dr. Sims. I do not propose to speak longer of this operation of Sims or of his other contributions to surgery, but there are several points in his character that I will briefly refer to. Sims was a man of keen observation: he allowed nothing to escape his mind. Thousands of human beings had witnessed the fall of an apple, but it was not until it was noticed by a Newton that it led to the discovery of the laws of gravitation; and thousands had seen the swinging lamp in the cathedral at Pisa, but it never led to any result until it was observed by Galileo, who first appreciated its value for measuring

time and applied it as the pendulum-movement in the clock. So it was with Sims. He applied the information which he gained from that woman with the dislocated uterus with such genius and ability that he is known everywhere as the Father of American Gynæcology. He was a man, moreover, of great patience and tenacity of purpose. Upon one of his cases he performed the same operation thirty times,—an example of patience seldom paralleled in the annals of our profession. He was determined to succeed,—determined not to be foiled in his efforts to relieve the poor victims of a loathsome affection.

Dr. Sims was a gentleman, a gentleman of the highest type. He was a large-hearted man, a liberal-minded man, a man generous to a fault, and a man of brilliant intellect. He was never connected with a chair in any medical school,—his health never permitted him to assume the duties of such a position,—but he was a well read man and an author; he expressed himself with eloquence and in the best language. But, gentlemen, this man died poor. He died poor because he could not help it. From a private letter which I received from him, dated in Paris last May, I learned the reasons why he did not make America his permanent home, why he expatriated himself for the greater portion of the time. He says, "I can make as much money in New York as I desire, but the climate does not agree with me as well as that of Europe. I can make more money there with less labor, and the expenses of living are less. Besides, it is not necessary I should assist Harry any longer: he is fully able to take care of himself."

The history of Dr. Sims is known not only in this country but in every part of the earth. He performed his operations in every civilized country in Europe, and was everywhere received with honor. France, Italy, Spain, Belgium, and Portugal sent him their decorations, the highest gifts bestowed upon foreigners for merit. Dr. Sims was connected with a great many medical societies in this country and in Europe; everywhere he went he was honored. When he went abroad, in 1861, he was invited to perform his operations in many of the hospitals of London, Paris, Belgium, and Dublin, which were thrown open to him for the purpose of demonstrating his methods.

Gentlemen, this was the man whose memory we meet to-night to commemorate. I think it proper that a committee should be now appointed in order to draft suitable resolutions expressive of our deep regret at the loss we have sustained, and of our warmest sympathy with his bereaved family.

The chair will nominate Drs. Hewson, Pancoast, and Andrews for this duty.

The committee presented the following resolutions, which were offered by Dr. Addinell Hewson:

"Whereas we have learned with extreme surprise and regret of the sudden demise of our distinguished fellow-alumnus, Dr. J. Marion Sims, an event which occurred from heart-disease, in the city of New York, on the morning of the 13th instant, at a time of his life when he seemed as active and zealous in his work as ever ;

"And whereas we feel that his loss is a most grievous one, not only to his immediate family, but to all who had relations with him either socially or professionally in the many years of his brilliant career in this country and abroad, we would desire to give some expression here of our heart-felt sympathies with those to whom his memory must be ever dear,—of our appreciation of him as a refined gentleman, and of our pride in him not only as a fellow-member of our Association and one of the most distinguished of the alumni of our *alma mater*, but as one of the most learned, liberal, and skilful members of the profession of the present day : therefore be it

"Resolved, First, that we offer our kindest sympathies to his family in their great affliction, with our assurances that they must ever be proud of those relations which bound him to them and to us. Secondly, that we, as individuals, as well as a body, will ever feel our loss in his death, and remember with pride and satisfaction what he did to exalt our calling and to advance the purposes of our Association."

The resolutions were unanimously adopted, after remarks by Prof. William H. Pancoast, Prof. Parvin, and Dr. Hewson, and the meeting adjourned.

MISCELLANY.

A FRAGMENT OF THE CODE CONTROVERSY IN THE NEW YORK ACADEMY OF MEDICINE.

—The following has been received from Dr. Harwood, the author of the communication :

"The following reasons why one of the Fellows of the New York Academy of Medicine declined to vote on resolutions when the yeas and nays were called, are contained in a communication to the Academy at its meeting held October 18, 1883 :

"Mr. President and Fellows of the New York Academy of Medicine :

"Important as the business before the Academy is, the undersigned believes that in view of the serious misrepresentations made as to his position regarding the voting on Dr. Flint, Jr.'s resolution, April 19, 1883,* he will be permitted, as a matter of privilege, to make a brief explanation.

* Resolved, That the Academy hereby disavows any sympathy with the action of the State Medical Society, which has put the profession of the State, through its State and County Societies, in an attitude of opposition to the medical profession of the rest of the United States.

"When called on to vote on said resolution, he declined to do so, and was subsequently reproached, both within and without these halls, for duplicity, timidity, and similar unpleasant qualities. He desires to state that his declining to vote had an entirely different motive from any which could be based on the contents of said resolutions. He believed and stated at the time, and still believes, that *said resolutions were out of order*, or, at least, inconsistent with those passed about a year previous and which were offered by Dr. Austin Flint, Sr.

"To those who have forgotten the transaction alluded to it may prove of interest to know that according to the Secretary's minutes of April 6, 1882,† 'The report of delegates to the State Medical Society was then taken up, and after remarks by Dr. Austin Flint, Sr., he moved that the report be accepted and the further consideration of the topics and objects which it contained be indefinitely postponed.

"Seconded and unanimously carried.'

"He was therefore in the unpleasant alternative position of either voting against resolutions which the Academy had previously sustained the *spirit of*, or of voting for them and repudiating the previous resolution carried by the Society. Aside from this, the defect of the resolution, the one before the house was not voted for as required by Section 5, Article XXV. of the By-Laws, which requires that the yeas and nays on any question shall be taken without debate, and recorded in the minutes, when called for by five Fellows present. It is a fact that the yeas and nays were not called for by five Fellows in accordance

Whereas, The New York Academy of Medicine has adopted in its By-Laws as its standard of medical ethics the Code of Ethics of the American Medical Association, and

Whereas, Each newly-elected Fellow of the Academy is requested to sign its Constitution and By-Laws, be it

Resolved, That the Committee on Admissions be and is hereby instructed to report to the Academy for election as Resident Fellow no physician who is known to the Committee to be in opposition to the Code of Ethics of the Academy, and who, as a consequence, cannot consistently sign the By-Laws of the Academy.

Resolved, That these instructions to the Committee on Admissions be continued in force until the American Medical Association shall have modified or repealed its Code of Ethics and such modification or repeal shall have been adopted by the Academy, or until the Academy shall have modified or repealed its By-Laws referring to medical ethics.

Dr. Gouley moved that reconsideration of the vote on that resolution instructing the Committee on Admissions be indefinitely postponed. Seconded and carried.

It is claimed that the passage of these resolutions was secured through a packed house, brought about through the medium of a secret circular.

On motion of Dr. A. L. Loomis, duly seconded, these resolutions were rescinded by a large majority-vote, leaving the National Code intact and the qualifications for resident Fellowship as formerly required by the By-Laws.

† The report cited referred to the New York State Code, and, as it was not in accord with the Code of the Academy, it was thought best to bury it, which was done with the full assent of all the Fellows present ; but a year or more subsequent it was in effect unwisely and unlawfully resurrected, for what purpose cannot be appreciated, but its effect was to cause, what Dr. Flint, Sr.'s motion was intended to avert, bitter feelings and unpleasant commotion among the Fellows. It is now hoped, as the Academy is again restored to its original basis, that scientific work will be renewed, and peace and harmony will forever prevail within its walls.

with the provision of the By-Laws, and this fact can be ascertained from the minutes.

"Respectfully submitted by

"(Signed) ED. C. HARWOOD, M.D.

"44 WEST FORTY-NINTH STREET,
NEW YORK, October 18, 1883."

CANCER OF THE BREAST IN A GIRL.—A remarkable instance of the breast being attacked with cancer has lately occurred in a patient aged only 13 years, who was last week under the care of Sir George Porter, in the Meath Hospital, Dublin. The part implicated was removed on the 24th ult., and the case is interesting in consequence of the youth of the patient. The cancer was not scirrhus, but consisted of a soft variety of the disease. —*Lancet*, November 3.

FRACTURE OF THE THYROID CARTILAGE IN LEGAL MEDICINE.—Suspicion of murder led to the disinterment in San Francisco of the body of a man who recently had been found dead. Upon examination, fracture of the right wing of the thyroid cartilage was discovered, showing that the man had come to his death from strangulation, due to pressure with the right hand of an assailant.—*Pacific Medical Journal*, October.

TREATMENT OF TAPE-WORM BY MALE FERN.—Empty the bowels by a mild purgative on the day before the specific treatment. Give the oleoresin of male fern, mixed with two parts of castor oil, in capsules containing about forty-five grains, of which six or eight may be given. Administered in this way, Dr. E. Dieterich says that it does not derange the stomach.—*London Medical Record*.

THE *Drug News* states that Dr. Brandini, of Florence, has recently discovered that citric acid will assuage the violent pain which is the usual concomitant of cancer. He applies to the part pledgets of lint soaked in a solution of four grains of the acid in three hundred and fifty grains of common water, with the result of affording instantaneous relief.

GERMAN HOSPITAL AMBULANCE SERVICE.—A HANDSOME DONATION.—The German Hospital of this city has received a gift of one thousand dollars from the managers of the German-American Bi-Centennial Association, through Dr. Ferdinand H. Gross, President. This amount will be devoted to establishing an ambulance service.

APPOINTMENT OF SURGEON-GENERAL.—Surgeon Robert Murray has been appointed Surgeon-General U. S. A., as the successor of Surgeon-General Crane, recently deceased.

FORMAD ON BACILLUS TUBERCULOSIS.—At the last meeting of the Philadelphia County Medical Society, Dr. H. F. Formad gave the results of his recent investigations into the pathology of tuberculosis, which will appear in an early issue of the *Times*.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY FROM NOVEMBER 10 TO NOVEMBER 24, 1883.

MOORE, JOHN, LIEUTENANT-COLONEL.—Relieved from duty as Medical Director Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

BACHE, DALLAS, MAJOR AND SURGEON.—Ordered to report in person to the commanding general Department of the East for assignment to duty. Paragraph 10, S. O. 259, A. G. O., November 12, 1883.

BACHE, DALLAS, MAJOR AND SURGEON.—Assigned to duty at Fort Adams, Rhode I-land. Paragraph 5, S. O. 215, Department of the East, November 19, 1883.

BROOKE, JAMES, MAJOR AND SURGEON.—Relieved from duty at Angel Island, California, and assigned to duty as post surgeon, Presidio of San Francisco, California. Paragraph 1, S. O. 162, Department of California, November 14, 1883.

HORTON, SAMUEL M., MAJOR AND SURGEON.—Leave of absence granted October 20, 1883, extended three months. Paragraph 7, S. O. 266, A. G. O., November 20, 1883.

TOWN, F. L., MAJOR AND SURGEON.—Until further orders, to perform the duties of Medical Director Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

WILLIAMS, JOHN W., MAJOR AND SURGEON.—Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department. Paragraph 5, S. O. 157, Department of the Columbia, November 12, 1883.

APPEL, D. M., CAPTAIN AND ASSISTANT-SURGEON.—Granted two months' leave of absence. S. O. 68, Division of the Atlantic, November 16, 1883.

GARDINER, J. DE B. W., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Huachuca, and assigned to duty as Post Surgeon at Fort Bowie, A. T. Paragraph 1, S. O. 104, Department of Arizona, November 8, 1883.

MUNN, CURTIS E., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Warren, Massachusetts. Paragraph 4, S. O. 216, Department of the East, November 20, 1883.

WINNE, CHARLES K., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Winfield Scott, California, and assigned to duty as post surgeon, Angel Island, California. Paragraph 1, S. O. 162, Department of California, November 14, 1883.

APPEL, A. H., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Warren, Massachusetts, and assigned to duty at Madison Barracks, New York. Paragraph 4, S. O. 217, Department of the East, November 21, 1883.

COCHRAN, J. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Bayard, New Mexico. Paragraph 5, S. O. 236, Department of the Missouri, November 15, 1883.

EGAN, PETER R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon being relieved from duty at Fort Bowie, A. T., to proceed without delay to Fort Huachuca and report to the commanding officer at that post for duty. Paragraph 1, S. O. 104, Department of Arizona, November 8, 1883.

RICHARD, CHARLES, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Adams, Rhode Island. Paragraph 3, S. O. 216, Department of the East, November 20, 1883.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To report in person to Lieutenant Schwatka, Third Cavalry, aide-de-camp, for temporary duty in connection with the completion of report of recent expedition to Alaska. Paragraph 3, S. O. 156, Department of the Columbia, November 9, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM NOVEMBER 10 TO NOVEMBER 24, 1883.

P. A. Surgeon C. H. H. HALL ordered to the Naval Academy, Annapolis, Maryland.
Medical Inspector STEPHEN D. KENNEDY dismissed the service by sentence of a general court-martial.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, DECEMBER 15, 1883.

ORIGINAL LECTURES.

REMARKS UPON CLINICAL CASES.

A Lecture delivered December 1, 1883, at the Pennsylvania Hospital,

BY PROF. J. M. DA COSTA, M.D.,

One of the Attending Physicians to the Hospital, etc.

[Reported for the MEDICAL TIMES.]

DIPHTHERITIC PARALYSIS, WITH REMARKS UPON ITS DIAGNOSIS FROM LEAD-POISONING.

GENTLEMEN,—The first case to which I will call your attention this morning is that of William S., 21 years of age, a laborer. He was admitted into the ward on the 26th of November. As regards his occupation, he states that he has worked a good deal in lead-works, and about April 1 of this year he was particularly engaged in working in a manufactory in this city, grinding, mixing, and packing white lead. He does not, however, seem to have suffered from any ill effects from the lead; in so far, at least, as there has been no history whatever of attacks of constipation, colic, or loss of muscular power. In August of this year, he had an attack of diphtheria, lasting for two weeks; he then returned to his work feeling as well as he ever did in his life. After working for a week, however, he found himself getting very fatigued at night. He had pains all through his body, and the limbs also, at that time. It seems, therefore, to have been a subsequent phenomenon to the severe sore throat. His symptoms getting worse, he gave up his work at the end of two weeks, to remain at home, though not in bed. Now, at this period there was marked difficulty in swallowing, and he found that liquids returned through his nose when he attempted to drink.

Upon admission to the hospital, what he most complained of was general tenderness and want of power in his limbs. His throat-symptoms were better; he could swallow without difficulty. We could detect no blue line upon his gums; but what was particularly noticeable, and what particularly brought him here for treatment, was that he could scarcely stand upon his feet, and was not able to walk at all. We found that this loss of power was not confined to the lower extremities, though it was there more marked; there was also loss of power in his arms; he had a weak grasp, and things would drop out of his hands. The

right hand showed rather more loss of power than the left. He has had no evidence of facial palsy; he was not constipated; his tongue was moist and slightly coated, and marked by the teeth. The lungs were normal. The first sound of the heart was weak, and there was a faint blowing systolic murmur; the second sound was distinct. The liver and spleen were normal in size.

He has only been in the hospital since the 26th of November, but in these few days he has been decidedly improving; though what brought him here, the loss of power, in the legs especially, is still a very prominent symptom. We will test the matter for ourselves. I have told you that he could not walk: now he can do so, but with great difficulty and the assistance of a cane; he stands without assistance. As he lies in bed, with his back supported, he has considerable power over the legs; you see that the loss of power is not complete; it is in walking that the loss of power is most marked. There does not seem to be any impairment of common sensibility to the touch, and tested with the æsthesiometer. Testing the tendon reflex, we find that the patellar tendon reflex is absent: this you may say of both legs. When I tickle the soles of his feet he feels it distinctly, but there is no reflex muscular action. He feels the prick of the pins and the compass-points. This is in the legs. We will proceed to test them with the battery. The muscular fibres of the gastrocnemius of the left leg, even with a strong faradic current, exhibit no contractions; a current of greater strength produces faint contractions. In the same way, with this very strong current acting upon the muscles of the anterior part of the leg, we obtain very slight contractions. The current, indeed, is so strong that the pain—for he feels this distinctly—produces reflex contractions of the muscles of the upper part in the thighs; the same result being obtained upon the right side as upon the left.

Therefore, we have greatly diminished, almost abolished, electro-muscular contractility, while the sensibility is fairly well preserved. In the thigh, both in the muscles of the front and the back, the electro-muscular contractility is better preserved, though even here, as compared with the normal, it is diminished, and the sen-

sibility is greater here, for with this same current the muscular sensibility is more evident in the thighs than in the legs; but on the whole, considering the strength of the current, I should say that it is actually, though slightly, diminished. Testing the fingers of the right hand with the æsthesiometer, while he feels the two sharp points he cannot tell them apart very readily: therefore there is some defective sensibility in the fingers of this hand; two points, half an inch apart, are only felt as one. In the left hand the same condition is found to exist.

In the muscles of the arms and forearms both, but more especially the forearms, we have the same electric reactions that we had in the muscles of the legs; that is, very much diminished electro-muscular contractility; and electro-muscular sensibility is also very much impaired. Even with this strong current you see that there is very little response. The flexors act better than the extensors, both in arm and forearm; he feels the current more decidedly than in the legs, but I should make the same observation here as before: the electro-muscular sensibility is reduced considering the strength of the current, for he does not feel the same pain that anybody else would. In the biceps and triceps the same inaction is observed. So, in the main, it comes to the same as in the legs. Observe, also, that the skin is rather bluish, both on the arms and legs; this is due to defective capillary circulation. I will repeat the observation made upon admission: there is no blue line upon the gums.

What is the matter with this man? Here is a double history,—a history of exposure to white lead, and a history of sore throat, which may have been diphtheria. You see at once that there is paralysis, and that it is general, both in the legs and arms. Is this palsy due to his occupation? or did it follow the sore throat which he called diphtheria? This is the problem that confronts us, and it is not as easy of solution as you might at first have thought. You may think that we will be able to get some assistance from the electric reactions that I have shown you, but the differences between the electric reaction of diphtheritic palsy and that of lead-poisoning are those of degree rather than of kind. In both there is greatly diminished electro-muscular contractility. It is true that in lead-poisoning this amounts to absolute

loss of power to contract even under the strongest electric currents, whereas in diphtheria this electro-muscular contractility is generally diminished rather than lost. Therefore, so far as this examination goes, the character of the paralysis is more in favor of diphtheria than of lead-poisoning, because we found that the muscular power, though diminished, was not entirely lost. And there are strong reasons for this view, and I announce it as my opinion, that the occurrence of the lead is a mere accident, and that all this paralysis is really due to diphtheria. I will give you my reasons for this view of the case.

In the first place, the *general* character of the palsy is in favor of diphtheria. It is in the arms as well as in the legs; in the flexors as well as in the extensors. In the palsy that exists from lead, this, as the rule, is not the case. I know there are exceptions, but, for the most part, the palsy from lead is local and limited to groups of muscles, especially the extensors. Therefore the extent of the paralysis is against lead and in favor of diphtheria.

Further, there has been here what is, I think, of considerable value in the history of the case: associated with the symptoms of loss of power in the extremities (which have now reached the point that he is unable to walk, except in a very limited way with assistance), there has been throat-palsy. The loss of power in the extremities was *preceded by signs of throat-paralysis*,—difficulty in swallowing, liquids regurgitating through the nose, etc.

Thus, in looking over the history of the paralysis, we find it to be that of diphtheria rather than of lead. You see I have been dwelling upon points of the paralysis itself and the way in which it originated, rather than upon the negative evidence of the absence of the blue line upon the gum and the absence of colic and constipation; for, after all, we might be deceived, and might lay too great stress upon their non-existence.

As regards the blue line upon the gum, it cannot always be detected in lead-poisoning; especially in cases like this might we be mistaken, where there is an accumulation of tartar on the teeth. Therefore do not dwell too much upon signs that are merely negative of lead in the system.

Now, when you come to examine further into this case you see evidence of a decided deterioration of the blood, which is

common in diphtheria,—that is, a soft murmur in the heart, due to blood-changes,—an anæmic murmur; the first sound of the heart is weak; the circulation generally is feeble. You have already noticed the defective capillary circulation.

You have had developed before you the diagnosis of this case of diphtheritic paralysis, which I have taken the opportunity of comparing with lead-poisoning, which also might have existed here from the peculiar history which we have obtained. The chief points upon which I base my diagnosis of diphtheria are, as you see, the general character of the muscular palsy (the loss of power being partial, not absolute); the existence of a certain amount of electro-muscular contractility; the history of antecedent sore throat, followed by difficulty in swallowing, and the rapid improvement in the paralysis (that of the throat having completely disappeared); and, on the other hand, the evidence of anæmia, defective heart-power, and enfeebled circulation, which are common to diphtheria.

Let us now ask ourselves what are the chances for his recovery, and what treatment will best bring about this recovery. The chances for his recovery are excellent. With the good care that he will receive here, the nourishing food and constant attention, I have no hesitation in saying that he will leave this hospital well. In truth, diphtheritic paralysis is one of those diseases where treatment can do a great deal.

Now, as regards the treatment of this case, I would say this: it must consist, first, in improving the quality of the blood. This is of course, and it is to be accomplished by iron,—the tincture of the chloride of iron, for instance. There is no better remedy than this, and you may give tincture of the chloride of iron in twenty-drop doses three times a day, which will be sufficient as a tonic dose. Then the remedy for cases of this kind, undoubtedly, in addition to the iron and plenty of animal food to improve the condition of the blood, is strychnia. The best means of using it is hypodermically; but there is a certain amount of inconvenience in administering it in this way. It is easier to give it by the mouth; but if I think that he is not improving as rapidly as he should, I will at once order it. He shall take it first in the usual way. We will give him the following:

R Strychninæ, gr. $\frac{1}{30}$,

in pill, thrice daily. He has been taking the fiftieth for several days, and it may now be increased. He shall also continue the tincture of the chloride of iron (gtt. xx t. i. d.) and a full nourishing diet.

The only question remaining to be considered in this interesting case is, Shall we make use of the battery as a part of the treatment? Hitherto it has been used only for diagnosis. What form of battery should be used? I will say this: there is no doubt that the muscular nutrition will be best kept up here by the judicious use of the battery to stimulate the various muscles. Where you find in these cases that the faradic battery produces contractions, use the induced current; where it will not, use the primary or galvanic current. Here the faradic current produces contractions, and we will adhere to it, applying it in turn to the different groups of affected muscles every other day.

This shall be the treatment, and, unless I am greatly mistaken, the man, in the course of a very few weeks, will present himself before you and walk into the clinic-room without a trace of his paralysis.

ACUTE PHTHISIS PULMONALIS.

James McB., 23 years of age, was admitted into this hospital November 21. His father died of pleuro-pneumonia after six months' illness. Remember, this is his own statement. His father died with progressive pulmonary disease, that is evident; but it is not likely that it really was pleuro-pneumonia, although he tells us so. It was a chronic lung-affection, probably phthisis, though it might have been one of those forms of inflammatory conditions of the lung which sometimes are continued for months. He says that his mother is living and well. One brother died with smallpox, two brothers and sisters are living and healthy.

Therefore, with the single exception of the father, who had what might have been pneumonic phthisis, or it might have been chronic inflammatory disease of the lung, there is no history of hereditary lung-trouble. Investigating his personal history, we learn that he is single, and is a tailor. He worked at his trade in 1876, and for some time after; he then tended bar for a while, then went on a farm for two years, and after that worked irregularly at his trade. He says that he has not been a drinking man.

About two years ago, he tells us, he was wrestling with a large man, and he was attacked by spitting of blood; and although the hemorrhage was quite free and he spat up a great deal of blood that afternoon according to his account, he did not seem to have any ill effects, for he went to his work as usual the next morning. I ask him if this is so, but I find that he is very deaf, and I fear that we will not be able to get much from him directly. I recall the fact that the history we have was only obtained with great difficulty, but we think that it is perfectly correct. I will adhere, therefore, strictly to the written statement, and give up any further attempt to get information from him.

He stated positively, and adhered to the statement, that he had no cough at all before the 3d of November, when he caught a severe cold. Since that time he has had cough, free expectoration mixed with blood, fever, night-sweats, prostration, and rapid loss of flesh. He has also complete loss of appetite, and constipation. The urinary examination was negative.

He has now not a great deal of cough, and a muco-purulent expectoration tinged with blood. He has had no free hemorrhage since the time he was wrestling that I have just mentioned, and, except an occasional mouthful of blood mixed with mucus, he has had none since he has been in the hospital.

You see by this record of the temperature, which is decidedly a temperature of fever, the character and progress of the disease since admission. It was 102° on the evening he came in, it has several times been down to 101° , and again here it goes up to $103\frac{1}{2}^{\circ}$, never down to normal, but usually showing a morning remission of one or two degrees. There are sweatings at night, and his cough is worse at night. The expectoration is not very profuse.

Now, gentlemen, he is emaciating rapidly, I am sorry to say: notwithstanding the strong efforts we have made, he has even fallen away considerably since he has been in the hospital; there is progressive emaciation.

Upon examining his chest, I find, by percussion, dullness over the whole right side; over here, on the left side, I do not find any dullness, except just under the clavicle, where it does not strike me as being perfectly clear. Everywhere on the right side

there is dullness, except at the apex in front, where the note sounds tympanitic. On auscultation, I find under the right clavicle, most distinctly, loud crackling sounds; they mask the breath-sounds, but on expiration I occasionally catch the respiratory sound, which is hollow and blowing. Lower down in the lung the sounds that are emitted are coarse, crackling, with a good deal of hoarse, harsh, almost bronchial breathing; that is, anteriorly. Posteriorly, I find also coarse, crackling râles at the apex, but not the hollow respiration which I perceived anteriorly; coarse râles, with here and there finer crackling and harsh, vesiculo-bronchial and in parts almost purely bronchial breathing, may be said to exist over the whole right lung posteriorly. Now let us see what the left lung will teach us. There is exaggerated breathing, which, at the lower part of the lung, may be said to be harsh respiration, perceptible everywhere. There are very few, if any, distinct râles anywhere, except that just about the middle of the lung I find a few, but none very distinct; and the only thing that strikes me at all—barring this harshness of murmur, which is most evident at the lower part of the lung—is a slight prolongation of the expiration which I notice at the apex.

Now, what is the matter with this man? I should not ordinarily discuss a case of this kind in the presence of the patient, but, as he cannot hear me, it will do no harm. He tells us that he has only been ill apparently since November 3, and we are now only at the end of the month. The question which arises is, "Has he or has he not tuberculosis?" Is it a case of phthisis, or one of ordinary inflammation of the lung? Gentlemen, I think it is phthisis. It is true it is confined to one side, but on no other view can I explain the rapid breaking down of the lung; while the night-sweats, and the rapid emaciation, also suggest this explanation of the case. Although he told us that he caught cold at the beginning, we know nothing of it: it may have been simply the commencement of those severe symptoms.

I am sorry to make the diagnosis—you know what it means to him—of acute phthisis; to say that the right lung is being destroyed, and that no treatment will be able to permanently stay the progress of the disease to its fatal termination.

The left lung, very probably, will also soon become implicated. This is the diagnosis and prognosis.

Let me point out a few points of clinical interest in this unfortunate case, where there is great and rapidly-progressing emaciation, fever, exhausting night-sweats, and marked destruction of the lung, coming on in the course of less than a month.

While there are those who believe that acute pneumonic phthisis and tuberculosis are distinct pathological processes, who hold the view that one originates in inflammation, the products of which become degenerated, and the lung converted into a caseous mass which subsequently breaks down, and yet there is no true tubercle, I must say this is a doctrine that I never did believe in, and I find myself believing in it less and less, the more I study such cases. I merely mention this as a matter of pathological interest, as this might be called by some a case of acute phthisis of inflammatory origin. I pronounce it a case of acute tuberculosis of the lung, for reasons which I cannot go into now, as it would lead into a discussion which would be more pathological than clinical.

The irregular fever, the cough, the night-sweats, the hemorrhage, and signs of softening make this case but too clear as being now one of acute phthisis, whether you look upon it as being inflammatory in its outset or tubercular from the first.

There is one point that should be mentioned: what about the original hemorrhage? Ought that to be considered as the cause of the subsequent events? I ought not to discard this from the history. Hemorrhage from the lungs may be followed by phthisis. I have seen persons apparently in perfect health, and in whom by no means of investigation could you have been able to detect any departure from health, who, as the result of a strain, have had an attack of congestion of the lungs and hemorrhage, which finally led to the development of phthisis. I merely point out that this has happened. I shall not detain you with a long account of how it happens. I simply state to you that if such an accident does occur, a part of the blood may be left behind to act as an irritant; and if the patient is at all disposed to tubercle, phthisis may afterwards develop as the result.

What can be done for this man? You think, probably, that I am entering into the question of treatment in a very hopeless frame of mind. This is true; but we must do the best we can for this poor man. There are cases in which the tubercular disease is stayed for a time, remains stationary, and life is thus prolonged. We will therefore do what we can to check the activity of the disease. We shall give him at night the one-hundredth of a grain of atropia to check the night-sweats. He shall have easily-assimilated food at short intervals, on account of his weakness; stimulants will be ordered, though in moderate quantities,—three ounces of whiskey a day, given in punch. We shall endeavor to keep down the irritative fever by a combination which is commonly used in these cases. It is a modification of Niemeyer's pill:

R Pulv. digitalis, gr. $\frac{1}{2}$;
Pulv. opii, gr. $\frac{1}{4}$;
Quininæ sulph., gr. i.

M. Ft. pilula.

Of this he has been taking one every three hours. He has been more comfortable since he has been taking this combination, and we will continue it. It is not a case for cod-liver oil, and not a case for nutrients,—I mean by that the iodide of iron and articles which change nutrition,—unless the man should happen to get rid of the fever and we have to do with a chronic case rather than an acute one. In its present condition the case is decidedly acute, and will be best treated by the measures we have indicated.

Gentlemen, I had other cases to bring before you; but, the hour having expired, I must reserve them for our next meeting.

THE INCURABILITY OF CONGENITAL COLOR-BLINDNESS.—Dr. B. Joy Jeffries calls attention to the fact that it is almost universally conceded by ophthalmologists and experts that congenital color-blindness is incurable. He refers to the contrary view held by Favre, of Lyons, France. Dr. Jeffries agrees in urging the value of educating the color-sense among the children of public schools.—*Medical Record*.

RESORCIN IN ANTHRAX.—In the treatment of carbuncle the following combination has been used with great satisfaction:

R Resorcin, $\mathfrak{z}\text{v}$;
Vaselin, $\mathfrak{z}\text{ij}$. M.

S. Apply.

ORIGINAL COMMUNICATIONS.

REPORT ON PROGRESS IN HYGIENE, TOXICOLOGY, AND MEDICAL JURISPRUDENCE.

BY HENRY LEFFMANN, M.D.

DANGER IN CANNED FRUITS.

THE extended use of articles preserved in tins makes the question of contamination by poisonous metals an important one. In some of the reported cases lead has been identified as the offending substance, but in my experience, notably with canned peaches, *tin* has been the metal dissolved. It appears by a report recently made by A. Winter Blyth, Medical Officer of Health to Marylebone, London, that of twenty-one samples of preserved fruits—apricots, tomatoes, and pine-apples—every one contained a dangerous quantity of tin, the least quantity found amounting to one and a half grain per pound, the largest to eleven grains per pound. The solution of the tin was, of course, due to the acid juices of the fruits. This solution, it may be observed, takes considerable time, and in the cases in which contamination has been found by me the fruits were more than a year old. Chemical tests were made on these samples, because they had caused some irritation of the stomach in persons who had partaken of them.

GENUINE WINES.

Those clinicians who are fond of extolling the merits of natural wines, and regard the artificial forms or simpler substitutes as not meeting indications, will be surprised to learn that, according to recent examination, natural wines are generally contaminated with substances of decidedly toxic qualities, as compared with ethylic alcohol. Some of these bodies—*i.e.*, amyl alcohol—are dangerous. The great regard which physicians generally have for the products of “nature’s laboratory” is not always based on facts.

THE USE OF ANTISEPTICS AND GERMICIDES IN ARTICLES OF FOOD.

The discovery of the specific preservative power exerted by such bodies as boric and salicylic acids has given rise to frequent use of them in various articles of food, and this fact renders important any inquiry as to the effect on the animal system of long-

continued use of these preservatives. A report has recently been published in Paris, which gives decided opinions on the question of the use of salicylic acid. It appears that some three years ago a Commission had, after investigation, decided positively against allowing this article to be used. The reasons given were that it has toxic properties, that the maximum safe amount is not known, and that, even if it were, the processes for estimating the acid in complex mixtures are not accurate enough to permit chemists to keep control over the articles sold. The Commission recommended the prohibition of the use of the acid, which was done. Much opposition, of course, arose from those who were engaged in selling articles thus preserved, and lately the question was reopened. It was pointed out, among other things, that new processes permitting of accurate determination have been discovered. The second Commission, however, after hearing all the arguments, refused to modify the original views. It still held to the views that the maximum quantity which could be taken was unknown, and that in many cases of disease, especially in affections of the liver and kidney, affections which are rather frequent, a contra-indication to salicylic acid exists. The prohibition against the use of this preservative is therefore continued.

The conclusions of the Paris Commission have an interest to us, because quite a number of preservatives and preserved articles are now in the market; the *rex magnus* which is being so extensively advertised is principally boric acid, but salicylic acid is also used, especially by brewers and bottlers.

The medical properties of boric acid and of its recent derivative boro-glyceride are little known, but the liberal use of these substances as antiseptics is likely to be for some time popular, and their effect when taken continuously in small doses is a matter of hygienic moment.

POISONOUS FOOD.

Many cases are recorded in which dangerous and even fatal symptoms have been produced by articles of food in which subsequent analysis has failed to establish the presence of any known poison. Comparison of different cases has not led to any very satisfactory result, for although it was evident that the food had in some way

suffered change, yet neither decomposition nor original disease appeared to be sufficient to render the substances poisonous. Many instances are noted in which putrefying flesh or flesh from diseased animals has been eaten without bad effects. The researches made in the last year or so on the products of putrefaction have given to us a clue, or at least the hope of one. The cadaveric alkaloids or ptomaines may very plausibly be regarded as the cause of poisonous effects. Some recent researches of Dr. L. Brieger, of Berlin, have an interesting relation to the question. In recording the recognition and isolation of new ptomaines, he points out that these products were only obtained in the earlier stages of the decay; as the process advanced the alkaloids were themselves destroyed. If this feature should be found to belong to all the ptomaines, we may certainly more easily understand the marked poisonous character of substances like sausage and cheese when in a state of staleness only, while similar articles are often eaten without effect when in even a marked condition of decomposition. Some years ago several deaths occurred in Philadelphia from eating old sausages. Specimens of the sausages were carefully tested, but no known poison could be found. They were not in a condition of active decay, but only markedly stale. It is not improbable that with the recently-acquired information on this subject a more satisfactory analysis could now be made.

ARSENIC IN KINDERGARTEN PAPERS AND TEXTILE FABRICS.

This subject has lately received some attention in medical journals. It appears that quite a large proportion of the papers sold contain arsenical colors, although non-arsenical papers are also furnished. Green colors are, of course, suspected at once; but reds have also been shown to be largely contaminated. Blue and yellow colors are mostly made with ultramarine and chrome-yellow, substances that cannot be considered as actively poisonous. The glazed papers are the most objectionable, for in these the colors are easily detached by the moist hands. The grade of papers known as "engine-colored," in which the coloring-matter is mixed in the pulp, is far more safe, because the material cannot be dislodged by water. A few weeks ago I made examinations of several samples of green paper of various shades

without finding arsenic. It is true, however, that these greens—which are possibly made of mixtures of chrome yellow and Prussian blue—are not so handsome as the arsenic-greens, while they are more expensive. The temptation, therefore, to use the more dangerous colors is very strong.

The supposed injurious effects of arsenical dyes are often referred to. Not only do the much-used aniline colors generally contain some arsenic as a residue from the arsenic acid used in the manufacture, but many of the chemicals used in the dye-house, such as sulphuric acid and tin chloride, are liable to arsenical impurity. As far as regards the arsenic in the dyes themselves, my examinations indicate that most of it remains in the dye-vat, since aniline reds which gave distinct reactions with Reinsch's test failed to communicate to yarn dyed by them any definite arsenical reaction.

POISONOUS HAIR-DYE.

No greater humbugs are palmed off on the community than quack medicines, and it is fortunate that many of them are frauds merely. Some of them are, however, decidedly dangerous, and among this class we find forms of hair-dye. An analysis of Ayer's Hair-Vigor, recently made in the laboratory of the Philadelphia Polyclinic, shows that it contains about a hundred grains of sulphur, and considerable sugar of lead. The sale of such a preparation under the deceiving title of a "hair-vigor" is a matter of moment in public hygiene. Cases of lead-paralysis from the local application of such dyes have been recorded, and the sale of these preparations ought to be prohibited by law. We have a poison-law in this State, which sets bounds on legitimate business; but the sale of any powerful poison is unrestricted if the name given to it is chosen to deceive.

ON THE ADVANTAGE OF AN ACQUAINTANCE WITH BOTANY AS A PRELIMINARY TO THE STUDY OF MEDICINE.

Read before the American Academy of Medicine, October 9, 1883,

BY BENJAMIN LEE, A.M., M.D., PH.D.,
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IN a paper which I had the honor to read before the Academy at its last meeting, and which was listened to with

much kind indulgence, I pointed, with what I considered to be a justifiable pride, to the noble record left by the founders of American medicine, and more especially by those who took the initial steps in the establishment of the first great centre of medical education in America,—the University of Pennsylvania. I was enabled to show that they were uniformly men of high culture and classical attainment, and that in the examinations which they instituted, the curriculum which they established, and the elevated and polished tone of their instructions, they aimed at perpetuating a line of physicians not less learned and accomplished than themselves. Not less clearly was I able to demonstrate the fact that this high standard of general attainment and elevation of character won for the profession of that day a social and political status commensurate with its true dignity, and truly enviable.

My task to-day is not of so pleasing a nature. I have to lament a fane neglected, a profession degenerate, an ancestry dishonored.

The retrospect of the succeeding epoch is by no means so flattering to the self-esteem of the patriotic student of American medical history. The age was possessed with the deceitful demon of an intense utilitarianism. It could see no good in anything which was not capable of being immediately and palpably converted into dollars and cents. All that could possibly be charged with the crime of being ornamental, of contributing to the adornment of life and of character, it scoffed at and frowned down. Medicine was compelled to share in the general debasement at the throne of Mammon. The style of education which it demanded was calculated to produce, and, with a few brilliant and praiseworthy exceptions, did produce, not physicians—men acquainted with the wide range of the physical sciences; not doctors—men learned themselves, and capable of teaching their fellow-men the great truths of physical life, of their relations to the world around them and to the forces of nature, and so induce them to lead healthier, happier, and more noble lives; but simply exhibitors of drugs, prescribers of pills and potions,—in the expressive language of the barbarians of our native wilds, “medicine-men.”

The call was for cheap doctors; and the supply was equal to the demand. All

over the country petty advertising agencies sprang up under the name of medical colleges, each new one offering its diploma at a less expenditure of time and for a lower standard of requirement than those already in the field. In order to keep their lecture-rooms full, the older colleges were compelled, or thought they were compelled, to accept students correspondingly less well prepared to enter upon the study of medicine, and to shorten rather than lengthen their terms of study, so that no opportunity was offered for supplementing this lack of qualification before graduation. The classics were soon kicked overboard. The Latin thesis, at first the rule, soon became the exception, and before many years was simply a curiosity of medical literature. The higher mathematics quickly followed, and finally the accessory sciences of botany, geology, comparative anatomy, and so on. Botany, however, held its own longer than any other of the supplemental departments of learning. In glancing over the interesting annals of the University of Pennsylvania, and its progenitor the Philadelphia Medical College, indeed, the attention bestowed upon this study from the earliest days of the College until comparatively recent times cannot fail to attract notice.

Three years after its foundation, in January, 1768, Dr. Adam Kuhn, returning from the completion of his medical education in Europe, where he had studied *materia medica* and botany under Linnæus himself, and the other branches at Edinburgh, received the appointment of professor of these two cognate subjects, which had heretofore been lectured upon by Dr. Morgan, as a part of his course on *Theory and Practice*.* This professorship he held for twenty-one years; but on the organization of the University of the State of Pennsylvania, in 1782, the two departments were separated, and the chair of Botany, after having been declined by Dr. James Tilton, of Delaware, was given to Mr. William Bartram. In 1789, when, through the exertions of Benjamin Frank-

* A letter of the great Swedish botanist is preserved, in which he thus congratulates Dr. Kuhn on this appointment:

“Viro Clarissimo Dno. Adam Kuhnio, in Philadelphia Botanices Professori, S. pl. d.

“Car. A. Linné.

“Tuas V. A. d. 12. Januarii datas hodie accepi et summo gaudio percepi, te professorem Botanices et *Materiæ Medicæ* in *Atheneo Philadelphico* constitutum; de quo, ex intimo corde gratulor! Hoc dixi uxori et literis, qui omnes, de tuâ hâc fortunâ, summum mecum percipere gaudium.”

lin and others, the College was again put in possession of its lost rights, Prof. Kuhn was reinstated, and continued to hold the position until the autumn of the same year, when he resigned it to accept the professorship of Practice of Medicine in the new university, and Dr. Benjamin Smith Barton, a native of Lancaster, in the State of Pennsylvania, was elected Professor of Natural History and Botany. This chair he filled most acceptably, not only delivering full courses of lectures for twenty-four years, and inspiring the students with a love of this science, which in several instances bore conspicuous fruits, but also publishing important contributions to its literature.* He resigned it only to take that of *Materia Medica* in 1796. Up to the year 1792, when the "University of Pennsylvania" assumed its present title and organization, attendance on the botanical lectures was compulsory. Dr. Barton, it may be said in passing, has been styled "the first teacher of natural science in this cis-Atlantic world."

Among those whom he trained as investigators in the rich field of the medical flora of the New World, and to whose efforts the whole world of medical science has tendered its acknowledgments for their valuable contributions to the *materia medica*, may be mentioned the honored names of Dr. William P. C. Barton, his nephew, Dr. William Darlington, Dr. William Baldwin, and Dr. Thomas Horsfield. In 1816 the chair of Botany ceased to appear on the list of regular professorships, from the fact that the trustees, in the vain hope of supplementing the purely technical courses by others designed to inform the students on allied branches of great importance to truly scientific men, established a "Faculty of Natural Science." This was the progenitor and model of the present "Auxiliary Faculty of Medicine," founded by the bequest of the late Prof. Wood, which is now doing a good but sadly-limited work among the post-graduates of the university and of other schools. First on the list of its professor-

ships was that of Botany; and Dr. W. P. C. Barton was at once called to assume its duties. Under his auspices renewed interest was aroused in the subject, and the trustees went so far as, with the aid of a liberal grant from the Legislature, to purchase a large tract of ground near the city, for the purpose of "establishing a garden for the improvement of the science of botany." This project, however, never seems to have been carried to its fulfilment. Among this gentleman's more important contributions to our knowledge of the therapeutic treasures in our fields and forests are his "Vegetable *Materia Medica* of the United States," "A Flora of North America," and "A Flora of Philadelphia."

The first mentioned of these works was a truly superb contribution,† in two large quartos, with finely-colored illustrations, and was "the first work of its kind ever published in America." Many of the plates were colored by the author's own hand.

In the course of the Preliminary Observations to the second volume the author complains feelingly of the growing influence of the spirit of which I have spoken in the opening of this paper. He says, "There are many discouraging circumstances connected with investigations of this nature, which I may not feel willing to combat or oppose. Among them is the notorious discouraging influence, at least in this city, relative to botanical pursuits, proceeding, too, from sources where accidental and professional elevation gives a kind of adventitious importance to opinions which would otherwise be wholly inefficient in their operation, if not beneath notice or refutation. As regards my own efforts, I am free to confess that my interests are too deeply connected with such opposition to the pursuits of the professorship I have the honor to hold, to be very solicitous to run counter to or struggle against such appalling circumstances. And at least necessity, if not the will, would urge a relinquishment of pursuits which are industriously taught to be incompatible with the severe and more useful occupations of medicine, or with the attainment of the more conspicuous eminence to which the practice of physic and surgery lead."

* "Collections for an Essay towards a *Materia Medica* of the United States. A paper read before the Philadelphia Medical Society by Benjamin Smith Barton, M.D., Professor of *Materia Medica*, Natural History, and Botany in the University of Pennsylvania, on the 21st of February, 1798." This little tract went through three editions, and introduced to the profession for the first time several remedies which have since become valuable stand-bys in practice. In 1803 he published his "Elements of Botany, or Outlines of the Natural History of Vegetables," illustrated by thirty plates, nearly all of which were original.

† *Vegetable Materia Medica* of the United States, or Medical Botany, etc. By William P. C. Barton, Surgeon in the Navy of the United States, etc., Professor of Botany in the University of Pennsylvania. Philadelphia, 1817.

In this work Prof. Barton introduces us to Dr. Schoepf, of Erlangen, Germany, a botanist who came to this country with the German troops during the Revolutionary War and employed himself in collecting materials for an American *materia medica*. In 1787 he published the result of his labors, in a small work entitled "*Materia Medica Americana Potissimum Regni Vegetabilis*," which Barton tells us, in his preface, laid the foundation of all the information we now possess concerning our native medicinal plants. Schoepf was certainly a most industrious collector as well as careful observer, the little vellum-bound copy of his book which I have had the good fortune to find in the library of the Pennsylvania Hospital containing three hundred and fifty-three distinct species, with their botanical characteristics, and, where known, their medicinal virtues, carefully recorded. It is written in classic Latin, and its thoroughness and conscientiousness certainly entitle it to Dr. Barton's encomium, although it is not the earliest work on this subject. The following extract from his preface is as pertinent to-day as it was a hundred years ago:

"I could not but wonder at the wealth which Bountiful Nature has bestowed upon the inhabitants of America, and the singular liberality with which she has furnished those broad and wide-stretching domains with all the aids, or at least those which are most essential, to the proper treatment of disease. But at the same time I was saddened that so many and such incomparable indigenous remedies should be almost entirely neglected in America itself, or, at best, known to but very few of the natives. For the great majority of those who practise medicine in America, although learned and cultivated men, who have studied the rudiments of the Art of *Machaon* either in the schools of Europe or in the colleges of America, learned their *Materia Medica* from the time-honored compends of European Physicians, and so, following the beaten track, neglect the supply of domestic simples in which their own provinces abound, and, as indeed is the case almost everywhere, look abroad for what they already have in abundance at home.

"Various reasons may be assigned for this neglect. To some a pompous farrago of remedies is distasteful, and, confining themselves to a limited selection of the

more conspicuous medicines, they despise all the rest. Others seem to think it below the dignity of a Physician to make use of simple indigenous remedies. In fine, some are unwilling, and others know not how, to step out of the trodden path. It is not every one who dares incur the risk of introducing a novelty."

In the Ridgway branch of the Philadelphia Library I find a quaint little time-stained volume, published more than a century earlier than the last, and entitled "*The American Physician; or, A Treatise of the Roots, Plants, Trees, Shrubs, Fruit, Herbs, etc., growing in the English Plantations in America. Describing the Place, Time, Names, Kindes, Temperature, Virtues and Uses of them, either for Diet, Physick, etc. Whereunto is added A Discourse of the Cacao Nut Tree, and the Use of its Fruit: with all the Ways of making of Chocolate. The like never extant before.* By W. Hughes. London. Printed by J. C. for William Crook, at the Green Dragon without Temple Bar. 1672."

Although pretentious in its name, however, it is not the work of a physician or of a scientific man, and takes no rank with the elaborate work of the German savant.

The period of our national history in which the Bartons lived was especially fertile in botanical research and authorship. As an appendix to his edition of Robin's "*Florula Ludoviciana*," or *Flora of the State of Louisiana*, Rafinesque gives the following list of botanical works then in process of publication or preparation (1817):

"*Botany of the Southern States, Carolina and Georgia.*" By Stephen Elliot, Esq., Charleston.

"*Descriptio uberior graminum et calamium Americæ Septentrionalis indigenarum et cicurum.*" Auctore D. Henrico Muhlenberg, Philadelphia.

"*Descriptio uberior plantæ Lancastriensis et Americanæ.*" Opus postum. auctore D. Henrico Muhlenberg.

"*Manual of the Botany of the Northern States.*" Albany.

"*Flora Novæ Angliæ, or Botany of the New England States.*" By Dr. Bigelow and Mr. Booth, Boston.

"*Prodromus Floræ Noveboracensis, or Catalogue of the Plants growing within Thirty Miles of New York, with some New*

Species." By Dr. Eddy, Messrs. Torrey and Knevels. New York.

"Flora Philadelphia," By Dr. W. P. C. Barton, Philadelphia.

"Synopsis of the Botany of the United States." By John Leconte, Esq.

"Medical Botany of the United States." By Dr. Bigelow, of Boston.

"Botanical Materia Medica of the United States." By Dr. W. P. C. Barton, Philadelphia.

Botanical Articles in the Journal of the Academy of Natural Sciences of Philadelphia.

Of the valuable and costly work of Dr. Barton I have already spoken.

I must not omit a reference to the superb work of Prof. Jacob Bigelow, of Harvard University, referred to in this list. A native of Sudbury, Mass., he practised medicine successfully for many years in Boston. He early published his "Florula Bostoniensis," and followed it not long after by his "American Medical Botany," in three large octavo volumes beautifully illustrated in color, the drawings having been made by himself. I take them to be the first specimens of chromo-lithography, or at least of printing in colors, ever executed in this country. This work appeared in 1817, and at once commanded marked attention, not only in this country, but in Europe. He also edited, with notes, Sir J. E. Smith's work on Botany, and was one of the committee of five selected in 1820 to form the American Pharmacopœia. In connection with this he is to be credited with the principle of the nomenclature, afterwards adopted by the British Colleges, of substituting a single word for a double in the *materia medica*, wherever practicable. He had the reputation of being an elegant classical scholar, and was as graceful as a writer in the general field of literature as he was able in the preparation of scientific essays. In the preface to the first volume of his "American Medical Botany" he pertinently says,—

"When we consider how small a portion of the vegetable kingdom has been *medically* examined, there can be little doubt that a vast number of active substances, many, perhaps, of specific efficacy, remain for future inquirers to discover. In this respect every successive age is making acquisitions. But a century or two ago the civilized world were unacquainted with the properties of *ipecacuanha*, of *jalap*, of

the Peruvian bark. The powers of *digitalis* in certain diseases are of very recent observation." And later in the same preface he appeals to the patriotism of his medical readers as follows: "It is the policy of every country to convert as far as possible its own productions to use, as a means of multiplying its resources and diminishing its tribute to foreigners. The plants of the United States are various in their character in proportion to the extent of latitudes and climates which our country embraces. . . . A great number of foreign drugs, such as gentian, colombo, chamomile, kino, catechu, cascarilla, cannella, etc., for which we pay a large annual tax to other countries, might in all probability be superseded by the indigenous products of our own. It is certainly better that our own country-people should have the benefit of collecting such articles than that we should pay for them to the Moors of Africa or the Indians of Brazil."

But it was not alone in the making of collections and publishing of treatises that the interest of that day in this most valuable science showed itself. When that enthusiastic young English botanist, Frederick Pursh, author of the "*Flora Americae Septentrionalis*," landed in this country, at the close of the last century, he found no less than four botanical gardens; well stocked, carefully maintained, and comparing very favorably with similar institutions in Europe. These were Marshall's, at Lancaster; the Bartrams', on the banks of the Schuylkill, near Philadelphia, founded under the patronage of Dr. Fothergill; the garden known as the Woodlands, also near Philadelphia, the property of William Hamilton, Esq.; and Dr. Hosack's, in New York, afterwards purchased by the State of New York. Pursh spent eleven years of indefatigable study in this country, and his work, in two volumes, containing accurate descriptions of seven hundred and thirty-nine specimens, and adorned with seventy-four fine engravings, has been a perfect mine for all subsequent investigators.

He was as brave as he was learned and diligent. On two occasions he made exploratory trips of three thousand miles through the pathless mountains and forests of what was then the extreme West, with no other companion than his dog and gun, being for weeks together out of sight of a human habitation or sound of a human

voice. His name has come down to us embalmed in the now fashionable laxative, —the *Rhamnus Purshiana*, or *Cascara Sagrada*.

The only treatise on this subject which American medicine has produced in comparatively recent times, which will at all compare in richness and beauty with the works of Bigelow and Barton, is Carson's "*Illustrations of Medical Botany*."*

This work was produced in five large quartos, the illustrations being life-size. It appeared in 1847. The author says in the preface, "Medical botany has been neglected in this country, not on account of its destitution of interest, but because the facilities of readily prosecuting its study have not been supplied, more particularly in the way of delineation. The connection between *materia medica* and botany is well understood; there is an indebtedness of the former to the latter, and a dependence either for the means of distinguishing between articles or of augmenting their number, too well settled to be controverted. Where an inability to understand the details of this science occurs, it must be a matter of regret to the individual, and cannot arise from any undervaluation of the subject. . . . Apart from the expediency of merely comprehending what is written in the books upon the department, the advantages and gratification experienced by one who has an insight into this scientific mode of description, exemplification, and arrangement will induce him further to pursue it. A wide field of research is opened, to be cultivated with infinite profit to himself, and, should opportunity present, with benefit to science itself."

In the same year with Dr. Carson's beautiful publication appeared an admirable text-book of "*Medical Botany*," the only one ever issued in this country, by Dr. Griffith, of Philadelphia. Since that time, now nearly forty years ago, the development of this important subject has been left almost entirely in the hands of the wholesale druggists.

The vast majority of medical graduates who devote themselves to the practice of their profession live either in the country or in rural towns, where the exigencies of

their practice take them into the country every day. How great are the opportunities of these practitioners, in their long, solitary daily drives, for making themselves thoroughly familiar with the flora of their respective neighborhoods! And how much might they not do towards developing the resources of our native *materia medica*! That such a systematic development is still greatly needed is sufficiently attested by the report made to the American Pharmaceutical Association by Mr. C. Lewis Diehl in 1870. He shows it to be a matter of the greatest difficulty to obtain any reliable information as to the collection of indigenous drugs. "It is a remarkable fact," he says, "that our Louisville druggists depend upon the New York markets for their supplies of indigenous drugs, many of which abound and frequently are collected in our immediate neighborhood. The Kentucky side of the river contributes to our supplies through a few small gatherers, chiefly Germans, but, taken altogether, our home-supplies far from meet the demand of our retail trade."

"Except to the initiated," says Dr. Maisch, in a paper read before the Philadelphia College of Pharmacy, April 16, 1872, "very little is known of the localities where many of the staple articles of the indigenous *materia medica* are collected for the general commerce, the information being usually limited to the geographical section of the country." "Although many of the indigenous plants have been used in domestic and in regular practice, the use of some seems to be altogether confined to certain localities, beyond which their medical properties are unknown or not appreciated."

"It would be very interesting to obtain reliable information concerning them. Dealers in indigenous drugs appear to sell them without questioning their identity, relying upon the statements of the Western collectors. The only way to arrive at correct results is to have complete specimens of the different species collected."

The germ of the science of botany was undoubtedly found in the study of the vegetable portion of the *materia medica* by the pupils of Aristotle. Shall it be said that medicine is unfaithful to its first love, and that the allegiance of more than two thousand years has now come to an end? Certainly it is a matter of importance that the country, if not the city,

* *Illustrations of Medical Botany*, consisting of Colored Figures of the Plants affording the most important Articles of the *Materia Medica*, and Descriptive Letter-press. By Joseph Carson, M.D., Professor of *Materia Medica* in the Philadelphia College of Pharmacy.

practitioner, should be able to distinguish between *dulcamara* and *datura*,—should possess, in other words, clear notions of the general aspect of deleterious plants as contrasted with harmless or beneficent ones. He may, of course, go much farther than this; for, as suggested to me by Dr. Rothrock, Professor of Botany in the Auxiliary Faculty of the Medical Department of the University of Pennsylvania, the mere fact of a plant belonging to a given order may not only determine it as being of therapeutic value, but may indicate the character of its medical efficiency. All gentians, for example, are tonics; most labiates are carminatives or aromatics.

Linnæus expressly says on this subject, "Plants that agree in genus agree in quality; those of the same natural order have nearly similar properties; and those of the same natural class are somewhat similar in their powers."

On this fact De Jussieu based his lectures on *Materia Medica* in the Paris Faculty of Medicine, eighty years ago. There are, of course, exceptions to this law, but the cases in which it holds good are so numerous as to make it of great practical value. It may also add greatly to the esteem in which a country physician is held by his neighbors, if he is able to tell them, on the appearance of a new plant in their neighborhood, its name, habits, and qualities, whether it will prove a friend or a foe, whether it will ruin their pastures or help to fatten their cattle.

Unprofessional men with a smattering of botany have not been slow to take advantage of this flaw in the armor of the regular physician. The result has been the development of a medical sect, who, wisely dropping the name of their father, Thompson, have caused the noble title of eclecticism to become a stench in the nostrils of every honest practitioner. For this we alone are responsible, for we have been unfaithful to our high and holy trust. In Europe, the study of botany is still obligatory upon the medical aspirant. In Sweden, so important is it considered that even the students of the Royal Gymnastic Institute, who intend to practise nothing but the Movement Cure, are compelled to pass a strict examination in it. One of the most thorough and enthusiastic botanists whom I know is a Swedish movement-cure licentiate, formerly one of my assist-

ants. If it be asked why, admitting the value of a knowledge of this science to the physician, it may not be studied after graduation, and be left optional with the individual, I would answer, first, that it is naturally an elementary and preparatory study, like chemistry, teaching us the history and nature of the tools we are to use; secondly, that a previous acquaintance with it will greatly add to the enjoyment and ready understanding of *materia medica*; and, thirdly, that all experience shows that, like other elementary studies, if it is not taken up before the more technically professional branches, it very rarely will be at a later period.

The Medical Society of the State of Pennsylvania, of which I have the honor to be a member, has been for years past silently but surely working for the elevation of the profession, by raising the standard of requirements for acceptance as a student of medicine. At the last meeting a report was adopted by a large majority, establishing a schedule of subjects for examination, and binding the County Societies to subject all applicants for admission into the offices of their members as students to such examination. I append the report in full to this paper. One of the sciences on which the Society has thought it desirable that the candidate should pass an examination is botany. A consideration of the claims of this study upon the attention of physicians generally, and especially of American physicians or those desirous of becoming such, has, therefore, a certain degree of pertinence at the present time.

It has been my aim, in this somewhat disjointed paper, to call attention to those distinguished members of our profession in this country who have delighted to devote their energies to developing our native *materia medica*, and whom the country and the profession have delighted to honor therefor; and, more by their shining examples and in their own forcible language than by argument or eloquence of my own, to stimulate others to renewed interest in this important department of medicine, and to call attention to the fact that this domain is by no means so fully explored that rich discoveries, full of honors to themselves and of benefits to their race and nation, may not await those who will even now thoroughly prepare themselves for its patient exploration.

REMARKS ON A CASE OF CARCINOMATOUS SARCOMA OF THE TESTICLE, AND ON MALIGNANT TUMORS OF THE TESTES.

BY W. G. MACCONNELL, M.D.

AT a recent meeting of the Pathological Society of Philadelphia I had the honor of presenting a specimen of carcinomatous sarcoma of the left testicle,* obtained from the Jefferson Medical College Hospital, from a young man under the care of Prof. John H. Brinton, who removed the diseased organ November 7, 1883.

The growth, in its histological features, is unique; at least I have not been able to find the record of a similar case.

It is claimed by the best authorities that by far the most frequent form of growth met with in this organ is the medullary carcinoma. Thus, Mr. Bryant, in an analysis of seventy-six cases, including the fifty-one cases of Mr. Ludlow, which were analyzed by him in reference to the ages of the patients, claims that they were of this type. Now, whilst so many very eminent authorities make this statement, a conclusion which I imagine to be based upon their gross appearances, I do not find it borne out by my own observations; for in twenty cases of tumors of the testes occurring in this city in the practice of Gross Sr., Agnew, Pancoast Jr., Gross Jr., Brinton, Levis, myself, and others, that I analyzed in reference to their histological characteristics, I found that ten were sarcomata of the round-celled forms, three were sarcomata of the ordinary spindle-celled forms, two were sarcomata of the large spindle-celled forms, three were tuberculous or scrofulous, one was a fibroma, and one was a carcinomatous sarcoma. The ages at which they occurred were from seventeen to twenty to forty years. These conclusions were verified by microscopical examinations, conducted by careful and competent observers. I therefore would award the first rank to the sarcomata in tumors of this organ. Prof. S. D. Gross, in the last edition of his "Surgery," also expresses the same view.

With regard to the location of this form of growth, I have found the disease to be invariably unilateral. The forms of tumors most frequently met with in this organ, in the order of their frequency, are as follows:

1st. Sarcomata.

2d. Chondromata (cystic degeneration may occur as a separate affection, but is more often associated with sarcomata, chondromata, and other growths). Next to the parotid gland, chondroma occurs most frequently in this organ.

3d. Myomata are among the rarest of tumors in this organ, and, when they do occur, are usually associated with carcinoma or sarcoma. Cases have been reported, however, by Billroth, Rokitansky, and Rindfleisch.

4th. Fibromata are the rarest of the tumor-formations in this organ. Cruveilhier has reported one case; Dr. Formad has reported one case. The so-called fibroplastic tumors of this organ, of Lebert and Hovard, may, I think, be relegated to the sarcomata.

5th. Malassez and others have reported cases of lymphadenomata.

6th. Van Buren has reported one case of dermoid cyst of this organ; Virchow records six other cases; Curling has reported ten cases.

The prognosis of sarcomata of the testicles is very unfavorable, the average duration of life, when they run a natural course, being about from ten to twelve months.

Implication of the glands, so rare in sarcomata in other situations, is frequently observed when the testicle is affected: indeed, the glands are more often affected in sarcomata than in carcinomata, so that this symptom affords us no aid in diagnosis. The frequent occurrence of lymphatic involvement tends to show, in the study of the histogenesis of sarcomata of this organ, that by far the greater number (if not all) originate from the endothelial cells of lymph-lacunæ that surrounds the tubules. The absence of glandular involvement in some of the cases that have been noticed can be explained, as was pointed out by Mr. Butlin in *The Lancet*, August 28, 1880, by the short duration of the disease.

Having stated that the prognosis, when the case is left to run its natural course, is very bad, I propose to show, by a few quotations, that an early removal not only prolongs life, but may, if performed soon enough, entirely prevent recurrence. Thus, of twenty-six cases analyzed by Prof. S. W. Gross, "three were well after castration for an average period of six years, two being free from recurrence for two years and one for fourteen years. Three pursued a natural course, and post-mortem showed generalization in

* For history of this case, see p. 217, *post.*—ED.

one, visceral tumors without glandular involvement in two. Of the twenty-six cases, twenty were castrated; of these, one was living with local recurrence and glandular involvement, and nineteen were dead, with glandular implication, and visceral deposits in lungs and osseous system in sixteen. Of these, in eighteen, or sixty-nine per cent., the retroperitoneal glands were the seats of secondary deposits."

Continuing, the same authority states that "of twenty-three patients subjected to operation, three were living at the date of the last reports for an average period of six years (and, strange to say, they belonged to the round-celled variety), one was still alive with local and general reproduction, and nineteen died of generalization of the disease, their average life having been twenty-seven months. Hence castration not only prolongs life, but may effect a cure. The total duration of life from the first observation of the disease until its termination after operation averaged eighteen months for the round-celled and twenty-eight months for the spindle-celled variety, and the former was followed by metastatic tumors in eighteen per cent. more of instances than was the latter."

I may also herewith append Curling's analysis of nine cases living after operation, but which do not seem to have been confirmed by microscopical examinations.

I was living 15 years after.

I " " 5 " "

I " " 7 " "

I " " 12 " "

I " " 9 " "

4 were " 5, 4, 3, and 2 years, respectively.

With reference to date of recurrence, I will give the period of recurrence in thirteen of the cases analyzed by Ludlow: five at two years, four at three years, one at ten years, and three at periods varying from six to eighteen months.

In the seventy-six cases referred to as analyzed by Bryant, which he calls medullary-carcinoma, the ages at which the disease occurred point strongly to the fact that most of them were sarcomata and not carcinomata. Thus:

Before 5 years,	6 cases.
From 15 to 20 years,	2 "
" 21 " 30 "	17 "
" 31 " 40 "	31 "
" 41 " 50 "	11 "
" 51 " 70 "	9 "

250 SOUTH TENTH STREET, December 3, 1883.

FOREIGN BODY IN THE BLADDER SUCCESSFULLY REMOVED BY SUPRA-PUBIC CYSTOTOMY.

BY DONNEL HUGHES, M.D.,

Philadelphia.

G. M., aged 42 years; married; weight, one hundred and sixty pounds; height, five feet ten inches. Has enjoyed good health all his life. While under the influence of liquor, and with a questionable motive, he introduced a steel bonnet-pin (five and a half inches long, having a glass head three-eighths of an inch in diameter) head first into his urethra, and accidentally pushed it out of reach. He first endeavored to remove it with an ordinary pair of tweezers, but, failing to do so, then tried to push the point through the wall of the urethra. While so doing, he snapped it off about one and a half inches from the point. Two hours after the accident I found him in a great deal of pain, with some urethral hemorrhage and a constant desire to urinate. As the point of the pin could be located, and was inaccessible by way of the meatus, I determined to perform external urethrotomy, which successfully removed the smaller portion of the pin. Finding that the other part was not in the urethra, a sound was passed into the bladder, and the remaining portion was very distinctly felt. After a consultation with Drs. John H. Packard and J. P. Stidham, it was determined to remove it by a supra-pubic operation. With the kind assistance of the above-named gentlemen, the following operation was performed. The patient having been etherized, I made an incision in the median line of the abdomen, extending from the symphysis pubis about three inches upward, dividing the skin, fascia, and aponeurosis. The bladder was distended with water, and a lithotomy-staff passed, the handle of which was well depressed between the thighs and firmly held there, in order to make the point of election more prominent. An opening was then made in the bladder about three-quarters of an inch in length, through which the foreign body could be readily felt by the finger and was subsequently removed with the forceps. The abdominal wound was closed with two hare-lip pins; the lower portion of which was occupied by a rubber drainage-tube extending into the bladder. The opening

in the bladder was left for nature to close. The hare-lip pins and drainage-tube were removed on the fourth day. After that time the urine was drawn every two hours with a gum catheter. The after-treatment was fifteen grains of quinine daily, and a two-grain opium suppository every four hours while awake and in pain. The abdominal wound was entirely healed on the eighteenth day, and all the functions of the bladder have been performed without any difficulty since that time.

17 SOUTH FORTIETH STREET, December 5, 1883.

NOTE ON IODOFORM.

BY PHILIP LEIDY, M.D.

FROM time to time recently there have appeared, in various medical journals at home and abroad, paragraphs recommending certain essential oils, such as the expensive oil of rose, geranium, etc., to be used for the purpose of concealing the persistent and disagreeable odor of iodoform. Considering the rank the latter has reached in therapeutics, such concealment is much desired. To add to the list I would recommend the oil of citronella as the most certain and satisfactory. Two drops of the oil to the drachm of iodoform will be found sufficient. It may be used for the same purpose with cod-liver oil when prescribed for external use. The oil itself is used as a rubefacient and anodyne externally, either alone or in combination. I am fully convinced of the advantages claimed for it. The price of the oil is a mere song, and as such is within the reach of all. The oil of chaulmoogra (very expensive), much lauded as an external application for sciatica, etc., I found much enhanced in its therapeutic value by combining with it the oil of citronella in the proportion of one-third of the latter. As it is comparatively little known to the profession in this country, I would recommend a trial, and am sure its use would become more general.

526 MARSHALL STREET, PHILADELPHIA.

POSTAL ARRANGEMENT FOR THE COLOR-BLIND.—It is claimed that many letters went to the Dead-Letter Office because of the inability of color-blind persons to recognize the difference in color between red and green. This is obviated by the law which has just gone into effect of having but one denomination and a uniform rate of letter-postage.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

SERVICE OF L. A. DUHRING, M.D., PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by HENRY WILE, M.D.

HERPES ZOSTER OF THE FACE.

GENTLEMEN,—This young man, 25 years old, presents an inflammatory eruption on the forehead over the right eye, extending from the eyebrow to the border of the scalp. From the color of the lesions we may infer that the eruption is in a late stage of development,—at any rate, that it is not as acute as it was a few days ago. According to the statement of the patient, it first made its appearance five days ago, in the form of papules, accompanied by an itching, burning sensation around the right eyebrow. He also states that on removing his hat he felt a pain shoot backwards over his head from the right eye. The case is not easy to diagnose, as the lesions appear in a somewhat anomalous form, yet there are sufficient appearances to characterize the lesions as those of herpes zoster. On one patch we see the disease in the vesicopapular stage, the lesions being crowded together in the form of variously sized groups or bunches, and affecting that region of the skin which is supplied by the right supraorbital nerve. They first appear as pin-head-sized papules, which soon pass into vesicles, the latter remaining intact, and at the end of two or three days drying up into crusts. The entire process is an acute one, and runs its course in ten or fifteen days. In the present case the disease is in a very light form; and in this stage, where there are crusts, small papules and vesico-papules, it may be confounded with acne or tubercular syphiloderma, but, bearing in mind the grouping of the lesions, their appearance along the course of certain nerves, and the history of the lesions, there is no difficulty about the diagnosis. No treatment is necessary in this case. The disease is self-limited, and will run its course in about one week; where, however, it is severe it demands treatment. The pathology of the disease shows it to be a nerve-affection, there being an inflammation of the cutaneous nerves, sometimes of the nerve-trunks. The treatment which is found most gratifying is that

by the galvanic current, a light current being used of five or ten cells. After the application the patients often express themselves as being greatly relieved.

As to local applications, one of the best is that of a lotion of the fluid extract of *grindelia robusta*, one drachm to one or two ounces. Another good lotion, and one which is useful in many other affections of the skin, is as follows:

R Zinci sulphat.,
Potassæ sulphuratæ, aa ʒss;
Aquæ, f ʒiijss;
Alcoholis, f ʒss. M.

Sig.—To be dabbed on the part every three or four hours.

*ECZEMA PUSTULOSUM ET PEDICULOSIS
CAPITIS.*

The next case is that of a little girl about 13 years of age, presenting a diseased condition of the scalp in the form of pustules, exudation, and a good deal of crusting. The hair is everywhere matted down by the exudation, doubtless through the agency of the many applications that have been made. In looking for a recent lesion, we find such to consist of small split-pea-sized pustules, and they are for the most part situated on the side of the face and on the back of the head, extending upon the neck. The mother of the patient states that the disease has existed ever since the child was six months old, sometimes being well, but relapsing from time to time.

Whenever we have this matted condition of the hair and the lesions described occurring in a child, we must suspect pediculosis. It often happens in chronic cases of this kind, where numerous applications have been made, that most of the pediculi have been driven away, and but few remain to keep up the mischief, so that it may become a difficult matter to find a *corpus delicti*. We can, however, prove the presence of pediculi by the presence of their ova. In this case, examining the hair on the sides and back of the head, we find them strung with nits, which, being once carefully examined, can hardly be mistaken. The appearance is sometimes simulated in seborrhœa by fine collections of epithelium which adhere to the hair, but in these cases a resort to the microscope will at once remove all doubt.

The case before us is, then, one of pustular eczema, which, judging from the lesions, has existed for some months, and upon which the pediculi became engrafted. A

practical point to be borne in mind in connection with this class of cases is the enlargement of the post-cervical glands. In this case these glands vary in size from a pea to a filbert.

The diagnosis having been made, the treatment is simple. The hair need not be cut, but the head is to be anointed with petroleum, covered with a flannel cap, and allowed to remain over-night. In the morning the scalp is to be washed with soap and water. One or two such applications are all that is necessary to remove the pediculi. Care must be taken not to use too much petroleum, as it may trickle down the back of the neck and produce excoriations. In order to remove the nits, some acid or alkali must be applied and the hair carefully combed. One of the best applications is that of acetic acid diluted, or common vinegar. When the pediculi shall have been removed, we will direct our attention to the eczema and order the use of an ointment of sulphur, one drachm to an ounce of cosmoline.

SYPHILODERMA TUBERCULOSUM.

The patient, a woman 40 years of age, exhibits on the flexor and extensor surfaces of both upper extremities an eruption consisting of flat tubercles, which have melted down, forming patches of a circinate shape, varying in size from a pea to a silver quarter-dollar. About the elbows are also fissured patches which have undergone ulceration, with the formation of crusts. The same formation exists upon the abdomen and about the thighs, the lesions consisting of characteristic crescent-shaped patches of flat tubercles. They are of a dull violaceous color, not coppery as is commonly the case with the tubercular syphiloderm. The scaling is insignificant, and not as in psoriasis, with which this form of disease may be confounded. The patient says that the eruption appeared four or six weeks ago. The lesions, however, look older. They exhibit a tendency to break down and ulcerate, so that unless treatment is at once commenced the disease may extend rapidly and assume a malignant type. The treatment will be internal, and the following will be ordered:

R Hydrarg. biniodid., gr. j;
Potass. iodid., ʒiiss;
Tinct. cinchon. comp., f ʒij;
Syr. aurant. cort., f ʒij. M.

Sig.—One teaspoonful three times a day.

Locally no treatment is necessary, and in two or three weeks we may expect to find a marked improvement.

TRANSLATIONS.

THE INFLUENCE OF DIABETES MELLITUS ON THE FEMALE SEXUAL ORGANS.—The ordinary occurrence late in life of diabetes in women has prevented the confirmation of the occurrence in them of complications of the sexual apparatus analogous to those which so often occur in men.

A case recently reported by Dr. Hofmeier, however, shows that when the disease occurs in young women disturbances of the genital system are also apt to present themselves. The case was one of an unmarried woman, 20 years of age, who had menstruated regularly from her fourteenth year up to one year before the time of the report, when she attended the clinic of the Berlin Hospital for Women for relief from pruritus vulvæ. It was then found on examination that the urine contained large quantities of sugar, and that the uterus was greatly atrophied, being less than 5 c.m. in length. Examination under anæsthesia by Prof. Schroeder revealed that the ovaries were also greatly reduced in size. As all other diseases were excluded, it was concluded that the atrophy was the result of the diabetes.

An examination of the records of the hospital was then made for similar cases. It was there found that of over one thousand cases attending for pruritus vulvæ nearly all had passed the age when menstruation ceases spontaneously. In all of these the examination of the urine for sugar was only omitted in seventeen cases, and of these only three had not reached the usual age of the menopause, and in these latter diabetes could be excluded by the other symptoms. There was only one case on record in which diabetes was present during the child-bearing age, and then, unfortunately, no record was made of the state of the menstrual function. These investigations point to the fact that in women diabetes ordinarily occurs late in life, and explain the apparent exemption of the sexual organs in diabetes in women.—*Berliner Klin. Wochenschr.*, October 15, 1883.

THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF CAFFEINE.—The following are the conclusions drawn by Dr. Leblond from a study of the physiological action of caffeine:

In physiological doses it is an excitant to the nerve and muscle system and decreases the number of pulsations of the heart, while the blood-pressure is increased by an increase in the vigor of the heart's beats; and by vaso-motor constriction. It reduces the peripheral temperature, and has no effect on the composition or quantity of the urine.

In poisonous doses, caffeine increases the excito-motor energy of the spinal cord, paralyzes the peripheral sensitive nerves, and reduces the irritability of the vagus nerve. In cold-blooded animals the heart beats gradually more and more slowly, and comes to rest in systole; in warm-blooded animals the heart beats faster at the last stage of the poisoning, and stops in diastole. Tetanus of muscular origin is also produced.

As regards its therapeutic application, it is stated that in general its administration is better borne than digitalis. When a commencement is made with small doses, the unpleasant effects which often accompany the use of digitalis are absent. It reduces the rate of the heart and produces a moderate diuresis. Its use is to be preferred to that of digitalis in serious cases requiring prompt treatment, as its effects are prompter and more certain.

The administration of caffeine should always be introduced with a dose not larger than 20 centigrammes, to test the susceptibility of the individual, and then increased to 50 or 75 centigrammes: it is applicable in all cases where digitalis is indicated. It may also be used with benefit in low fevers, where its stimulant effect on the heart and its power of reducing temperature make its employment advantageous: it has also seemed to be of benefit in albuminuria.—*Deutsche Med. Zeit.*, October 11, 1883.

ETIOLOGY OF LEPROSY.—In a monograph entitled *Sull' Etiologia parasitaria della Lepra*, Dr. D. Barduzza, of Pisa, contends that (1) lepra is parasitic and contagious; (2) the contagium is represented by bacteria, which penetrate the organism in the form of threads. It is necessary that the skin shall present a solution of continuity for their admission.—*Gazette Médicale de Nantes*.

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, DECEMBER 15, 1883.

EDITORIAL.

THE EXPERIMENTAL PRODUCTION OF DIPHTHERIA.

IN the essay which received the prize offered by the German Surgical Society, Heubner* considers the artificial production of diphtheria from two stand-points: first, the causes of the local infection in human diphtheria, and second, the cause of the general infection. The first part is concerned with the experimental production of the diphtheritic affection of the mucous membrane.

From the investigations of Cohnheim and Litten, who found that temporary arrest of circulation produced the diphtheritic process in the tissues deprived of blood (Weigert's coagulation-necrosis), the author was led to discard the ordinary method of corrosive application to the mucous membrane, and, instead, to employ this method of temporary arrest of circulation. The bladder of the rabbit was the tissue experimented on, and his plan was to ligate the neck of the bladder with a silk thread, and to allow the ligature to remain *in situ* for two hours. The changes in the vesical mucous membrane which followed this interruption of the circulation were then studied upon the following days.

During the first day after the operation there was a marked hemorrhagic oedema of the mucous membrane; its epithelial cells were swollen and loosened. In the second day there occurred a firm, coagulated exudation at the point of the earlier changes, and on the third day genuine diphtheritic patches were found in the mucous membrane, which were in all dis-

cernible respects identical with those occurring in human diphtheria. Subsequently there occurred a "coagulation-necrosis" of the epithelium, mucous and submucous layers of the membrane. This artificial diphtheria, therefore, originated precisely as Cohnheim has postulated,—through the union of violent inflammation and necrosis. The author also proved that the circulation was present in the diseased tissues only shortly before death.

Local membranous exudation, therefore, in man, may be explained as due to a temporary arrest of circulation in the mucous membrane through vascular spasm or through pressure, as by a swollen tonsil. The diphtheria thus produced by the author was not communicable by inoculation to healthy animals.

In the second part of his essay the author sought to produce an artificial synthesis of the local diphtheria and the general infection. He at first inoculated animals in whom this local diphtheria had been produced with the bacilli of splenic fever (*Milzbrandgift*), and found large collections of the bacilli in the diseased localities, but only within the vessels. Animals with artificial local diphtheria were then inoculated with diphtheritic matter from the human subject; the animal died in from two to three days, with all the symptoms of an acute general infection. The same result followed the employment of scarlatinal poison, and the author concludes that the bacilli which were found in both cases cannot be regarded as the diphtheritic poison. For, were this the case, they must be found in the vessels of the diseased membrane in diphtheria in man: he has, however, never succeeded in finding them there, and, moreover, the so-called specific diphtheritic fungus is not essential to the production of the general infection. He concludes, therefore, that the organisms often associated with diphtheria develop as a consequence of the disease, and not the reverse. These conclusions

* Centralblatt für Chirurg., October 20, 1883.

agree in the main with those obtained by Wood and Formad, who deny the specificity of the micrococcus which has been by some supposed to be the agent directly concerned in the propagation of the disease.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

WITHIN a few years the College of Physicians of Philadelphia, which, it may be necessary to inform a very few of our readers, is a scientific and social organization of medical men and not a medical school, has certainly entered upon a new and larger sphere of usefulness. Although its membership is restricted, the number of applications for fellowship is increasing, and it has now one hundred and eighty-three names upon the roll, a larger number than ever before. At every meeting this year, we believe without exception, papers have been read, the value of which the demand for the last published volume of *Proceedings* fully attests. At the December meeting, held on the 5th instant, three papers were read, the annual reports of the treasurer and standing committees were received, and nominations were made for officers for the ensuing year. Prof. Stillé, who has so ably presided during the past year, having declined re-election, Dr. Samuel Lewis was nominated for president. Prof. J. M. Da Costa as vice-president, Dr. R. A. Cleeman, secretary, Dr. Charles Stewart Wurts, treasurer, and Dr. J. Ewing Mears, as recorder, were renominated without opposition. Dr. S. Weir Mitchell retired from the Nurse Registry Committee, which now is well established and is a source of income to the library.

The report of the Library Committee, read by the chairman, Dr. Walter L. Atlee, contains some interesting facts. This library, which is the best private medical library in the country, and in size is exceeded only by the library of the Surgeon-

General's Office at Washington, now contains over twenty-six thousand volumes, exclusive of pamphlets and many unbound books.

This annual report showed that there have been added to the library during the past year 2186 volumes, 2107 pamphlets, and 2862 numbers of current journals.

In the collection there are 3381 duplicates, generally in good condition; and the committee wishes to call particular attention to this fact, inasmuch as it affords a rare opportunity to other libraries of augmenting their lists at a comparatively small expense.

The library is directly under the charge of the honorary librarian, Dr. James H. Hutchinson, and employs an assistant librarian and a clerk occupied in cataloguing.

The committee announces that for the ensuing year the library will be kept open, except on Sundays and legal holidays, from 10 A.M. to 5 P.M.

A Committee on Entertainment has been appointed, and, through the liberality of one of the Fellows, an Entertainment Fund has been instituted by a donation of five thousand dollars. Another well-known member of the College has given a large sum towards putting another story on the building, in order to make more room for the rapidly-growing library, and to accommodate the increasing pathological collection in the Mütter Museum, which in some respects stands unrivalled in this country.

A REMOTE DANGER OF ELECTRIC LIGHTING.

THE English medical journals have recently noticed the constant menace to life and health offered by the network of telegraphic, telephonic, and other electrophoric wires overhead in the streets, —public attention having been pointedly directed to the danger by an accident oc-

casioned by the breaking of a wire, which in its fall seriously injured a lady.

In a New York journal (*The Nation*, November 29) is an account of an accident that might easily have been even more disastrous in its consequences. On one of the avenues, a few evenings since, one of the heavy insulated wires belonging to the electric light system, by some means, fell to the ground across the roadway. A horse stepping upon it, there was a momentary flash of light, the horse fell dead, and all the lights on the avenue were extinguished. The account goes on to say that a second horse trod upon the broken wire, and he also fell dead. The streets were cleared by the police, and the wire was soon repaired. The possibility of such an accident happening to a pedestrian is a strong argument in favor of the underground system of conducting the wires; more especially since the experiments upon it in this city, not long ago, fully demonstrated the practicability of this method, which is now being introduced in our principal streets.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS.

AT a meeting held November 7, 1883, at the College, the President, Prof. A. Stillé, in the chair, Prof. Roberts Bartholow read a paper entitled

ENTERIC PARAPLEGIA.

By the term enteric paraplegia I intend to express the conception of a spinal paralysis produced by an intestinal disorder. It is a truly reflex paralysis. The fact of the existence of such a malady is denied by many, and indeed most of the reported examples will not bear careful inspection, for it will be found, as I shall show, that they are really cases of ascending neuritis. Eliminating such from the examples of true reflex paraplegia to be found recorded, I intend to place the latter in a special group composed of cases presenting the symptoms of an enteric disease, during the course of which a motor and sensory paraplegia manifests itself and pursues a course obviously dependent on the original lesions. The cases I have lately seen occurred in men over sixty years of age,

and each one presented a morbid complexus so distinctive and uniform as to entitle it to be regarded as a substantive affection,—a pathological entity. Although such cases have been described as examples of reflex paralysis, they have not been adequately differentiated from others similarly classified but of different nature.

Before attempting the task of analysis and differentiation, I must give a brief outline of three cases, the most recent which have come under my observation.

Case I.—Mr. R., æt. 64, merchant and banker, of very vigorous and robust frame, rather spare and bony in outline, but capable of great endurance, called on me a year ago, among other physicians of this city, for relief to an obstinate bowel-affection. His story was this. For a year or more previously he had suffered with intestinal indigestion, colic pains, flatulence, and considerable depression of spirits. Soon after these symptoms were experienced he began to have pain in the back, with more or less band-like constriction of the abdomen, a feeling of numbness in the feet and legs, a strong sense of fatigue in the inferior extremities, followed by weakness and awkwardness of movements in walking, obstinate constipation, and slowness in the emission of urine. For the relief of these alarming symptoms he consulted an eminent practitioner of this city, who diagnosed myelitis, and advised cups, the moxa, and a pill which probably contained ergot. Without using any of the local applications, Mr. R. took the pills, which had a favorable effect in relieving the flatulence and constipation, but presently dysenteric attacks supervened, and then a remarkable change ensued in the spinal symptoms. Up to this period the paraplegia had steadily increased, and walking had become exceedingly difficult, but the change in the condition of the intestine effected a revolution in the state of the spinal functions, and in the course of a few weeks all the paralytic symptoms had disappeared. Still troubled with intestinal indigestion, Mr. R. finally consulted me among others, when I learned the details of the case just given. Very recently I have heard that Mr. R. continues free from the spinal symptoms, and has in the main got rid of his intestinal disorder.

Case II.—Mr. P., a tall, thin, but hardy Quaker farmer, æt. 72. I saw the patient at his home near Delta, York County, this State, in consultation with Dr. Hickman, a very intelligent practitioner living there. I learned that the patient some ten years before had experienced a similar attack, but had recovered rather suddenly under the influence of some remedies which were then prescribed. For some years he remained comparatively free from disorders of digestion. The present attack came on during the past winter. At first there appeared a very considerable dis-

turbance of digestion,—acidity, pyrosis, flatulence, and colic pains. The distress was increased by taking food, and apparently attained its maximum when the alimentary materials entered the intestines. In fact, the symptoms of intestinal indigestion were the most pronounced throughout, and to these was added obstinate constipation, the stool consisting of balls united by masses of mucus or coated with the same. Very soon after the gastro-intestinal catarrh was established, Mr. P. began to experience numbness of the feet and legs and an increasing difficulty of locomotion.

At the time of my visit with Dr. Hickman the patient was nearly entirely disabled. The history of very severe and continuous digestive troubles was repeated. I will, therefore, to occupy as little time as possible, pass on to the objective examination of the paraplegia.

He could not stand without assistance; there was an extreme degree of ataxia; the muscles were so weak that his utmost efforts could not at all hinder slight movement of extension when the legs were flexed on the thigh; the tactile sense was so lowered that the points of the æsthesiometer could not be felt at all; the muscles responded feebly to an induction current; the emission of urine was very slow, and there was much dribbling afterwards; and the bowels were extremely sluggish. There was a feeble knee-jerk.

With attention directed entirely to the digestive trouble, beginning with an exclusive milk diet, in two weeks a marked improvement was manifest in all the symptoms, the paraplegia disappearing. In a letter recently received from Dr. Hickman, I learn that, after a period of very great improvement, Mr. P. began to decline in strength, owing to failure of the functions concerned in nutrition.

Case III.—Mr. McK., of Clearfield County, about 60 years of age, has had for many years frequent attacks of sick-headache. Within the past year, pronounced symptoms of intestinal indigestion, pain of a colicky character, flatulence, and irregular action of the bowels, etc., have come on; but the symptom which has caused the greatest apprehension, and on account of which more especially he has called on me, is an increasing numbness with some diminution of power of the inferior extremities. The tactile, pain, and temperature senses are not abolished, only slightly impaired, and the tendon reflex is unaffected. A feeling of fatigue, of weight and heaviness, is felt in the legs, but locomotion is not as yet much affected. I await further developments in the symptoms referable to the nervous system, but meanwhile treatment is directed to the gastro-intestinal disorder.

Cases similar to those which I have thus briefly outlined have been recorded by vari-

ous observers. An admirable example, and one of the first of its kind, was narrated by that eminent clinician, Graves, of Dublin (*Clinical Medicine*, edition by Neligan, vol. i. p. 558). In this case extreme gastric disturbance, with less important intestinal, came on in distinct paroxysms, varying in duration from several days to two or three weeks, and accompanied by complete motor paraplegia. For a time, entire recovery took place, the paralysis disappearing with the cessation of the other symptoms. Finally the attacks grew so frequent as to be almost continuous, and death ensued from exhaustion. The minutest examination failed to disclose a lesion in any organ of the body. With the advance in our means of investigating morbid states, such cases of presumed functional disease of the nervous system are becoming more and more rare. That there is a condition of reflex paraplegia, due to anæmia of the cord, is a postulate I expect to maintain. That there is, however, a so-called reflex paraplegia connected with diseases of the gastro-intestinal and genito-urinary tracts, which is not truly reflex, is another postulate that I believe to be susceptible of demonstration.

There was a period, in England more especially, when the notion of reflex paraplegia secondary to intestinal, renal, and genital disease was widely entertained. The cases first reported by Stanley (*Medico-Chirurgical Transactions*, vol. xviii. p. 260); Brodie ("Lectures on Urinary Organs," p. 115), Stokes ("Practice of Medicine, Treatment of Nervous Diseases"), Graves, and others, were supplemented by the striking narratives of Gull (*Guy's Hospital Reports*, various papers). Then Brown-Séquard ("Lectures on Paralysis," etc., 1861) gave a scientific explanation of the mechanism, referring the paralysis to vaso-motor action. It must be admitted, nevertheless, that the doctrine of a reflex paralysis has not maintained the position it once had. In no modern work is the subject treated with the extent and gravity befitting an important disease.

The two postulates I purpose to sustain are—

1. That there is a reflex paraplegia due to a functional disturbance of the intestine,—enteric paraplegia.

2. That there is a paraplegia having its initial seat in the end-organs of the nerves distributed to the mucous membrane, thence ascending to the cord by a progressive neuritis.

As respects the first postulate, the cases I have narrated, and many others on record, demonstrate a causal connection between the enteric disorder and the spinal. That the paraplegia is functional is proved by its prompt cessation when the cause is removed.

One of the means of determining whether a given paraplegia is due to a myelitis or to mere anæmia—that is, functional—is the sub-

cutaneous injection of strychnine. At a late meeting of the American Neurological Association, Dr. Jewell, of Chicago, recounted his experiences with considerable doses of strychnine in cases of paraplegia, which improved so remarkably that they must have belonged to the merely functional group. It is in a high degree probable that cases of merely reflex paraplegia,—of enteric paraplegia,—especially as they occur in aged subjects, are relatively frequent, and happen from a degree of intestinal disturbance that seems a mere accident of the morbid complexus.

What is the mechanism? We are helped in our consideration of this question by physiological data. Kussmaul and Tenner (quoted by Erb) have shown that sufficient loss of blood will cause paraplegia. Tying the abdominal aorta, and its obstruction by disease,—of which Gull (*Guy's Hospital Reports*, 1858, p. 311) has given a striking example,—embolic blocking of the spinal vessels, as Panum (*Virchow's Archiv*, Band xxv.) has experimentally demonstrated, and large uterine hemorrhage, as Moutard-Martin (*L'Union Médicale*, 1852) has shown, have alike stopped the spinal cord functioning. In other words, an insufficient blood-supply—an anæmia—is a cause of paraplegia. Brown-Séquard, in his Lectures, published in 1861, maintained the thesis that a strong contraction of the vessels of the cord induced by reflex stimulation is the essential condition in reflex paraplegia. We should not lose sight, in this connection, of the degree of stimulation necessary. A moderate degree of intestinal irritation suffices; for the law of reflex contraction of the vaso-motor fibres may be formulated thus: irritation of the end-organs of the sensory nerves, not too violent and long-continued, stimulates the vaso-motor centre in the medulla, and causes a general contraction of the arterioles; but excessive and protracted irritation depresses the vaso-motor centre and relaxes the vessels. It seems probable that an ordinary intestinal indigestion and the stretching of the nerve-fibres produced by retained gas is a degree of irritation sufficient to produce the supposed effect. To the further elucidation of the mechanism of enteric paraplegia, it is necessary to recall the fact that the blood-pressure in the vessels of the intra-abdominal organs rises and falls within considerable limits in quite an independent manner, controlled, doubtless, by the same ganglia that regulate the calibre of the intra-spinal blood-vessels.

The circulation within the spinal canal is peculiar, in that the veins bear such a disproportionate volume to the arteries, and that the whole vascular supply is in a certain sense a diverticulum. Athérroma of the vessels will contribute to the result of reflex irritation; and hence it is that paraplegia has resulted from endarteritis of the spinal vessels.

The second postulate is that the paraplegia

which succeeds to certain cases of enteric, renal, or genital disease is due to an ascending neuritis. Chronic dysentery, pyelitis, and vesical catarrh are affections during the course of which the spinal cord has become diseased. Lesions of continuity involving the terminal nerves in structural changes are necessary to the production of this effect. The part which ascending neuritis may play in causing anatomical alterations of the spinal cord is exhaustively shown by Friedreich in his monumental work on progressive muscular atrophy (*Ueber progressive Muskelatrophie, über wahre und falsche Muskelhypertrophie*, Berlin, 1873, Hirschwald). Whether we accept his conclusions or deny them, we cannot withhold the full measure of admiration for his labors. Starting with the theory of an intramuscular neuritis, Friedreich holds that by an extension of this affection upwards the cord is ultimately reached and the changes belonging to progressive muscular atrophy are wrought. The intramuscular neuritis admitted, the rest may easily follow. Under the term "Chronic Ascending Neuritis," Duménil has described the changes in injured nerves which, caused by trauma, proceed from the point of injury up to and involve the cord. Vulpian has especially demonstrated the modifications produced in the spinal cord by the section of a principal nerve in a member, usually the sciatic (*Archives de Physiologie Normale et Pathologique*, No. 3, 1868, p. 443). The nerves of a limb amputated, as Dickinson has especially shown, undergo degenerative atrophy, and that part of the spinal cord in anatomical connection therewith also atrophies. Many other observations might be quoted, but these will suffice to show how changes in the cord follow injuries to peripheral nerves.

In paraplegia secondary to ulceration of the mucous membrane, we can readily, I think, conceive of a lesion of the peripheral nerves, and an ascending neuritis, to which the succeeding changes are due. It follows that such cases require a very different prognosis from those of simple reflex paralysis. The course and termination of the latter are affected by the causal lesions, whilst the former pursue a steadily unfavorable direction from the beginning of the spinal symptoms. The differentiation of reflex from secondary paraplegia is made by attention to the following points:

Reflex paraplegia is sudden in its onset, or, at least, develops quickly; secondary paraplegia is gradual in its evolution: the former is soon complete in all points of its symptomatology; the latter attacks one spinal function at a time. Reflex paraplegia follows the fortunes of the producing malady; secondary paraplegia pursues an independent course, and when the alterations begin in the spinal elements they proceed in their own way, just as after amputation of a limb the changes

of the cord go on in the associated nerve-fibres, or as in Landry's ascending paralysis the lesions proceed by contiguity of tissue. Reflex paraplegia, of and by itself, never proves fatal, nor does it inflict permanent damage; secondary paraplegia may be the cause of death, and, if not fatal, effects lasting mischief.

To this view of reflex paraplegia it may be objected that extreme variations in the vascular supply must ultimately lead to structural changes. This is certainly possible; but the spinal circulation, like the cerebral, is arranged to permit considerable variations in the amount of blood.

It remains to explain, if an explanation be possible, why intestinal or renal lesions may in one case produce a merely reflex disturbance and in another set up an ascending neuritis. There are, probably, two reasons: 1st, the depth and extent of the peripheric lesions; 2d, an inherent susceptibility to degenerative changes in the nervous elements. The first, to me, has profound significance, and I have already alluded to it. A degree of peripheric irritation not too great will merely stimulate the vaso-motor centres, and cause anæmia of the cord by tonic contraction of its vessels; but when the lesions of the mucous membrane are of a destructive kind, depression of the trophic centres, as well as of the vaso-motor, ensues. That there is a neuropathic type of constitution, in which the nerve-tissues are peculiarly prone to take on morbid changes, is an indisputable fact. When the two influences coincide, the result is not doubtful.

I must, then, conclude that there is a malady which may properly be entitled *Enteric Paraplegia*.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, November 22, 1883.

The President, Dr. TYSON, in the chair.

Large intestines from two cases of chronic dysentery, one of the specimens showing pseudo-polypi. Presented by J. H. MUSSER, M.D.

CASE I.—The patient had chronic dysentery; further clinical information not given, and no record of autopsy preserved. The specimen is from the museum of the Presbyterian Hospital, and I present it to-night on account of its rarity. It is a part of the large intestine, fourteen inches long. To the naked eye it shows thickening of the mucous and submucous layers and hypertrophy of the muscular layer. On the surface of the mucous coat innumerable polypoid growths are observed, some pedunculated, some sessile. The sessile growths are from the size of a millet-seed to that of a chestnut, round or ovoid. The others also vary in size

from a pea to a large bean; their pedicle is generally one-sixteenth to one-eighth of an inch long. The reporter remembers seeing the specimen when recently removed, and knows there were more pseudo-polypi than are here visible, many having fallen off from handling, etc.; that there was scarcely any healthy mucous membrane; that in this part of the intestine there was almost complete ulceration of the mucous coat. At one point a large stellate cicatrix, depressed in the centre, is noticeable, while all over the surface cicatricial lines are observed, most distinct about the bases of the growths.

Remarks.—In connection with this specimen, I would like to call the attention of the members to a minute description of a similar specimen by Dr. Woodward. His article may be found in the *American Journal of the Medical Sciences* for January, 1881, and is entitled "Pseudo-Polypi of the Colon: an Anomalous Result of Follicular Ulceration." According to the writer, the origin and development of these polypi is as follows: 1st. A granulating ulcerated surface of the intestine. 2d. Numerous islets of mucous membrane on this surface. 3d. "The formation of cicatricial contractions commenced in the infiltrated submucosa, constricting the margins of the islets of mucous membrane, which were further transformed by hyperplastic inflammatory processes until ultimately they acquired the form of pedunculated excrescences and projected into the lumen of the intestine, like so many little polypi,"—being pushed out by the contraction of the connective tissue. Although the surface of the mucous membrane appeared to the naked eye healthy, with the microscope it showed it was submucous connective tissue infiltrated with lymphoid elements. The pseudo-polypus was composed of a central portion of connective tissue and a peripheral portion of diseased mucous membrane, the former continuous with the submucous layer, the latter limited to the surface of the growth. The histological changes in the mucous and submucous layers resembled those of chronic inflammation. The remainder of the bowel showed follicular ulceration. I am unable to say what was the condition of other parts of the bowel in the specimen exhibited.

Case II.—For this specimen I am indebted to Dr. Gittings, of West Philadelphia, for whom I made the autopsy. It was removed from a well-known druggist of this city, who had been a sufferer from chronic dysentery for some time. The bowel-affection was especially severe during the past summer. He had been ill of an acute exacerbation for about one week when Dr. Gittings was asked to see him. The symptoms were of an acute dysentery, but not alarming. The effects of the habit of using chloroform, chloral, and alcoholics to excess, which habit he continued during his illness, complicated the clinical features. About the tenth day of his illness

the typhoid state suddenly developed, and he died in coma two days thereafter. His temperature never was higher than 102°; tormina and tenesmus were marked, bloody and mucous discharges were excessive.

Autopsy, eighteen hours after death.—Rigor mortis marked. Body well nourished. On section, the abdominal walls were loaded with fat, and large deposits of this tissue were found in the great and lesser omentum, the meso-colon, and the epiploicæ. The mesenteric and lumbar lymphatic glands were not enlarged. The cæcum was surrounded by old lymph, the appendix bound down by adhesions and thickened. The cæcum was dilated, the transverse and descending colon contracted; the walls of the entire colon were thickened. On opening the large intestine it was found to be extensively ulcerated. The mucous membrane and the ulcers were strikingly anæmic and of a pale cream-color; there were no points of hemorrhage. The walls were thickened; the mucous membrane was swollen; the ulcers were more numerous and larger in size at the cæcum. The smaller ulcers were the size of a dime; some of the larger extended around the gut, and were one-half inch to an inch wide. The edges of the ulcers were regular, bevelled, and thickened, the floor rather clean; the deepest did not extend beyond the muscular coat, the more superficial only included the mucous membrane. The larger ulcers were on the tops of the folds of the intestines. A tenacious, thick mucus covered alike the ulcers and the adjacent structures.

Condition of other organs.—Liver enlarged and fatty. Kidneys markedly cirrhotic. Spleen normal. Heart slightly hypertrophied.

Microscopical examination revealed the changes in the intestine of chronic inflammation, and that the ulceration was of a simple nature and not due to tubercle.

Case of carcinomatous sarcoma of the left testicle. Presented by Dr. W. G. MACCONNELL.

This specimen was removed from a young man by Prof. Brinton, at the surgical clinic of the Jefferson Medical College Hospital, on Wednesday, November 7, 1883.

History.—Jacob A., æt. 26 years, a clerk: about eighteen months ago he struck his testicle, in mounting his horse, on the pommel of the saddle, from the pain of which he fainted. No inflammatory enlargement, however, of the organ ensued. Last May he noticed that the left testicle had begun to enlarge, which continuously increased in size until it had attained its present volume. There was a sense of heaviness in the tumor, but no pain was experienced until about two weeks prior to its removal, when he noticed a periodical pain, of a burning nature, which, with the increasing size of the organ, caused him to apply for relief. It weighs about eight

ounces, and measures in its long diameter four and a half inches, transversely three and a quarter inches, and about two and a quarter inches in thickness. No lymphatic involvement was present, nor was the cord involved. The veins of the scrotum were enlarged and prominent. The tunica vaginalis testis is slightly thickened and very opaque. The tunica albuginea is also thickened. A slight remnant of the epididymis exists in the form of a small fibrous lump. Its shape is somewhat that of a kidney, and upon section showed a moderately firm, buffy-colored tissue. It did not cry under the knife. In color and consistence it resembled the soft fibromata. Distinct remains of the fibrous septa are to be seen. There are no cystic changes nor any chondroid tissue present. Its microscopical appearance and consistence suggested a spindle-celled sarcoma; and as such, upon section, I diagnosed it. Microscopically, at a first examination, from the great ecstacy of the epithelium present I was inclined to regard it as a pure medullary carcinoma; but, after a careful study of several sections, I am inclined, by reason of the juvenescence of the connective tissue, both round and spindle cells being present, to call it a carcinomatous sarcoma. There was no history of syphilis, scrofula, or tubercle, nor had any member of his family ever labored under any form of tumor.

Dr. NANCREDE called attention to the fact that modern microscopic study has shown that carcinoma of the testicle is a rare disease; most malignant tumors of that organ being really sarcomata. In this connection it is of much practical interest to note that the system becomes infected at a relatively late period of the disease, so that when a sarcomatous testicle is removed at an early stage of the disease, prolonged immunity, if not actual cure, may result. The inguinal and retroperitoneal glands were those usually affected, their enlargement, by pressure, pain, etc., being the ultimate cause of death. Even more distant lymphatic glands are in rare cases involved.

Dr. FORMAD agreed with Dr. Nancrede. Some years back he had paid special attention to the study of malignant growths of the testicle and ovary. Of the former he had examined thirty cases, all of which were sarcomata. He did not believe in the existence of such a growth as true carcinoma of either the testicle, ovary, or kidney. The so-called carcinoma of those organs exhibits cells of a *connective-tissue* type rather than of an epithelial. Dr. Formad considered, with many other observers, that the so-called epithelial cells of kidney, testicle, and ovary are really *endothelial*, and gave reasons in support of this view. He further said that there is a variety of endothelial carcinoma occurring in the breast, which is that usually described as alveolar sarcoma. Here the endothelial cells of the

lymph-spaces proliferate, but the glandular elements of the mammæ do not participate. It is doubtless from the examination of such tumors that Virchow, and Cornil and Ranvier, have gained the erroneous idea that true carcinoma takes its origin from connective tissue. The speaker would suggest the term "*endothelial carcinoma*" for such tumors instead of "alveolar sarcoma."

Dr. DAVIS could not think that Dr. Formad was correct in absolutely denying the existence of carcinoma of the testicle, ovary, and kidney.

Dr. MACCONNELL agreed with Dr. Nancrede as to the relative frequency of sarcoma of the testis, having examined a large number of such specimens. He could support the views of Dr. Formad as to the growths of the testicle originating largely in proliferation of the endothelia of the lymph-spaces and tracts.

Sarcoma of the breast. Presented by Dr. G. E. DE SCHWEINITZ.

Some weeks ago, I had the pleasure, through the kindness of Dr. Ashhurst, of exhibiting a specimen of cysto-sarcoma of the female breast, and to-night I am once more indebted to him for the privilege of showing this tumor, also a cysto-sarcoma, but differing in type from the previous growth. It is another instance of the truth of the remark, so justly made by Rindfleisch, that the expression cysto-sarcoma is by no means to be conceived as the designation of a definite, perhaps round-celled sarcoma, with cysts, but it only tells us that a new formation with the textural character of histoid tumors had attacked the mamma and dilated its pre-formed cavities.

This growth was removed from the person of a lady of middle age, married, but childless. She assigns no cause for its appearance. The growth of the tumor has been slow, it having originally been noticed six years prior to the date of operation. The weight of the mass immediately after removal was three pounds and one ounce. On palpation there was a distinct sense of fluctuation. The skin over the tumor was discolored, but not adherent. On section the growth is seen to be composed of two parts, the one about the size of a closed fist and the other somewhat smaller. The section evacuated a quantity of bloody, mucus-like fluid. The centre of each mass is seen to be cystic, or, rather, the masses are the papillary and irregular excrescences which have protruded into the dilated ducts. The growth is composed of numbers of variously-shaped nodules, whitish or yellowish-white in color, but in some spots semi-translucent and resembling somewhat colloid material. The microscopic examination of various portions shows a similar result, differing only in degree; large round-celled sarcoma tissue, and some spindle cells,

generally diffuse, but in places tending to alveolar arrangement, here and there round, stellate, and spindle cells branched and anastomosing (mucoid tissue), numerous blood-vessels, usually wall-less, or mere channels passing through the tissue. In many places the sections show the enlarged ducts cut transversely and lined with a single layer of columnar epithelium. Surrounding them is a dense matrix of connective tissue. It may not be uninteresting to state that the specimen has been preserved in a solution of hydrate of chloral (gr. xx- $\frac{3}{4}$), after the manner originally recommended by Dr. W. W. Keen, with what success the beautifully-fresh and natural appearance of the growth plainly attests.

C. B. NANCREDE,
Recorder.

NEW YORK PATHOLOGICAL SOCIETY.

A REGULAR meeting was held November 28, 1883, GEORGE F. SHRADY, M.D., President, in the chair.

HYDROCEPHALUS.

Dr. H. N. HEINEMAN presented the brain of a child who died at about the age of two years, at the Mount Sinai Hospital, with the history that when about two months old it fell upon the head from a chair, since which time it had not been well. There had also been an eruption upon the body. About the twelfth month the head measured in its occipito-frontal diameter twenty-three centimetres, and from ear to ear posteriorly fourteen centimetres. There was a perceptible increase in size the last six weeks of life. There was an elevation of temperature preceding death; some vomiting; no convulsions. The patient lay in bed, with the head resting upon a pillow. It was quite small for a child two years of age: at death the body weighed twelve pounds. The chief interest of the case related to the brain, the convolutions of which had been greatly thinned and unfolded by the action of the fluid within the ventricles. The fluid amounted to more than a quart. There was no distention of the central canal of the cord. There was slight broncho-pneumonia, which probably had been the immediate cause of death.

SARCOMATOUS TUMOR OF THE STERNUM.

Dr. CHARLES HEITZMAN presented the specimen, and said that the patient, a physician, had come to him in April, 1882, to have his blood examined under the microscope, thinking that he was suffering from leucocythæmia. Dr. Heitzman found the opposite condition from what the patient expected,—a diminished rather than an increased number of the colorless blood-corpuscles. Afterwards, some specimens of fluid obtained by aspiration of a small tumor over the sternum were

sent him for examination, but the first examination was negative. The last specimen, however, presented appearances which were believed to indicate approaching dissolution. The patient died, and at the autopsy the body was found greatly emaciated. The tumor over the sternum, now the size of a large egg, communicated, through a small opening in the sternum, only large enough to admit the little finger, with a cavity in the anterior mediastinum below, which contained blood. The pleura and the apices of the lungs were transformed into dense, fibrous connective tissue, believed not to be of malignant character. The tumor itself was a sarcoma. The spleen was enlarged and very firm. The patient had suffered from malaria. The liver was the seat of interstitial hepatitis.

In reply to a question, Dr. Lange said that clinically the tumor had been regarded as a sarcoma.

Dr. HEINEMAN thought it was the rule that in carcinoma and sarcoma of the lungs and in pleura the diagnosis was not made out during life.

Dr. VAN GIESON referred to a case in which the malignant process commenced in the lung and extended to the sternum, and in which there had been no difficulty of diagnosis. Statistics of a large number of cases gave a correct diagnosis during life in forty-five per cent.

Dr. HEITZMAN had once made the diagnosis of sarcoma of the lung from the presence in the sputa of a large number of globular elements, smaller in size than pus-globules. A diagnosis of carcinoma of the lung had been made by the physicians in charge. The autopsy showed sarcoma.

ACUTE PYÆMIA OF URETHRAL ORIGIN.

Dr. G. L. PEABODY presented the heart of a man who had died of acute pyæmia of several days' duration, following the introduction of a sound into the urethra. There had been stricture at the bulbous portion, necessitating the use of the catheter. When the sound, No. 15, was passed, but little injury was believed to have been produced. Notwithstanding, a chill and fever followed, and led to death. Pericarditis and endocarditis had been diagnosed during life. At the autopsy there were found well-marked signs of pericarditis and ulcerating endocarditis, and also commencing abscess of the kidney-structure. In the blood-vessels in the neighborhood of the abscesses in both the kidneys and the heart were large numbers of micrococci.

GREAT DILATATION OF THE URETER IN A CHILD.

Dr. R. VAN SANTVOORD presented the ureters of a child, 12 years of age, who was admitted to the Randall's Island Hospital, with the following history. At the sixth month of age an operation, the nature of which could

not be learned, was performed for spina bifida, the cause of paraplegia and of paralysis of the sphincter of the rectum and of the bladder. The operation resulted in cure of the spina bifida, with return of power to the legs and the sphincter ani; the difficulty with urination continued. A catheter was passed on admission to the hospital, and a quart of urine withdrawn. The catheter continued to be passed daily. The patient lost appetite, had nausea and fever; the urine was turbid and contained pus and albumen. Death took place in three months, from exhaustion. At the autopsy the vesical walls were much thickened and sacculated, the left ureter enormously distended, being larger than the small intestine. The pelvis of the kidney was also dilated, and the organ itself contained abscesses. The right ureter was less dilated, and the right kidney also contained abscesses. They were not permitted to examine the spinal cord.

EXTIRPATION OF METACARPAL BONES FOR BUNION.

Dr. L. H. SAYRE presented metacarpal bones removed from both feet of a man who had suffered for years from bunions which had given much trouble and on two occasions had been the seat of ulceration. An incision was made on the dorsal aspect of the members, the affected metacarpal bones were removed with the bone forceps, and the edges of the wounds were closed with black silk. Union took place inside of two weeks, and the patient was soon able to be about with comfort, and had a movable joint.

ULCERATION OF STOMACH PRODUCING FATAL HEMORRHAGE—OBSCURE SYMPTOMS.

Dr. BEVERLY ROBINSON presented the specimen, which was removed from a man, a salesman, who entered St. Luke's Hospital, having suffered for some time with difficulty of breathing and cardiac palpitation. On admission there was slight mental alienation; the feet were œdematous; there was some albumen in the urine; there was double pleuritic effusion; the heart was enlarged and dilated. His condition changed but little until November 19, when his face was observed to be very pale. He was breathing with difficulty, and in this condition he soon died. A considerable serous effusion into the pleural cavities was found; the heart was dilated; there was no valvular lesion; the lungs were in a state of brown induration; the stomach was distended with blood, which had escaped from an open blood-vessel at the seat of an ulcer at the pyloric orifice. The interest of the case was the presence of so large an ulcer, and of internal hemorrhage resulting in death, with so obscure symptoms. It was remembered that there had been some discharge of a bloody fluid from the rectum the evening previous to death. Digestion had been good.

PARIETAL ABSCESS—MENINGITIS—DEATH.

Dr. W. P. NORTHRUP presented the skull and brain of a child which died when about eight months old, having had for two weeks preceding death an abscess of the right parietal bone. The cause of the abscess was unknown, and the symptoms produced were very slight, such as scarcely to attract attention. There was some irritability, hyperæsthesia, and stiffness of the muscles of the neck. At the autopsy the convexity of the brain was coated by a thick layer of pus; no direct relation could be traced between the parietal abscess and the inflammation of the membranes of the brain pathologically.

Dr. W. M. CARPENTER asked if the meningitis might not have developed independently of the external abscess.

Dr. PETERS remarked that a number of cases had been published in the Transactions in which direct extension of the inflammatory process could not be traced from the external abscess to the membranes within.

A VERY THIN SKULL.

Dr. J. A. WYETH presented part of a skull which had broken to pieces with a slight blow of the hammer when he was about to open it for demonstration to his class. The bone was but little more than one-sixteenth of an inch thick. He inquired, would not this condition explain how fracture and death occurred in some cases where but a slight blow had been inflicted upon the head?

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting, held at the hall of the College of Physicians, Philadelphia, November 21, 1883, Dr. William M. Welch, President of the Society, in the chair, Dr. J. H. Musser read a paper entitled

FURTHER NOTES ON THE USE OF HAMAMELIS IN THE TREATMENT OF VARICOSED VEINS.

After referring to his original paper in the *Medical Times*,* which first called attention to the use of hamamelis in the treatment of varicose veins and their sequences, he reported the subsequent experience of a number of clinical observers upon its effects, several of which confirmed his statements as to the value of the remedy in varicose veins. The fluid extract—a dark-colored preparation—is used in doses of a drachm three or four times daily. It had also been found useful in phlebitis of chronic Bright's disease, hæmaturia, menorrhagia, and bleeding hemorrhoids; cases of which were mentioned in the communications he had received in response to the original paper. The combined testimony

shows that the remedy has a decided effect upon the venous structures.

NOTE ON PARALDEHYDE AS AN HYPNOTIC.

J. C. Wilson, M.D., read a note upon paraldehyde, in which he gave a description of its physical characters and chemical constitution. A limpid fluid of an ethereal taste and odor, it may be administered internally in doses of half a fluidrachm to two fluidrachms well diluted with water. Given in this way, it produces drowsiness without preliminary excitement, and it has been utilized by Italian physicians in dementia paralytica, in hysteria, and in other forms of disorder of the nervous system. In several cases mentioned by the lecturer it acted well as an hypnotic, its usefulness being shown most markedly in a gentleman suffering with depression and sleeplessness after a debauch, upon whom bromide of potassium and chloral, in reasonable doses, failed to have any influence. In its action it most resembles chloral, and it may prove a useful addition to our sleep-producing drugs.

REVIEWS AND BOOK NOTICES.

THE MEDICAL STUDENT'S MANUAL OF CHEMISTRY. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Toxicology in the University of Buffalo and the University of Vermont, Professor of Physiological Chemistry in the University of the City of New York, Chemist to the City of Buffalo, etc. Wm. Wood & Co., New York. 8vo, pp. 356.

While occupying the position of municipal chemist, and filling the chairs of chemistry in three colleges in cities far separated, Dr. Witthaus has found time to produce two textbooks. The Student's Manual is, in a measure, a new edition of the "General Medical Chemistry," written by Dr. Witthaus for Wood's Library of 1881. Medical students will find it generally satisfactory, as it contains more or less information on all of the more ordinary chemical compounds, as well as many of the rarer substances.

Due prominence is given to the description and instructions for examination of constituents of the body, urine, etc. It is to be regretted, however, that the details of analytical methods are printed in type so small as to tax the eyes severely.

That portion of the book devoted to the compounds of carbon is rather more extended than required in a work intended for students. Indeed, the molecular structure of carbon compounds, as here explained, could hardly be understood by one who had not already studied the subject, in which case the graphic formulæ would be superfluous.

Dr. Witthaus has abandoned, as arbitrary and unscientific, the classification of the ele-

* For April 21, 1883.

ments as metals and non-metals, but retains the terms metal and non-metal for the sake of convenience.

We notice that glucinum is classed with aluminium, while its atomic weight as given would require its introduction into the magnesium group.

Considering the difficulties in the way of combining the chemistry of the Pharmacopœia, general, medical, hygienic, with theoretical chemistry, we think that Dr. Witthaus has fairly succeeded in his task. G.

THE COLLECTIVE INVESTIGATION OF DIPHTHERIA, AS CONDUCTED BY THE THERAPEUTIC GAZETTE, DETROIT, MICHIGAN. WITH AN EDITORIAL SUMMARY BY J. J. MULHERON, M.D. Detroit, G. S. Davis, 1883. 8vo, pp. 120.

This book is made up of the replies of one hundred and four practitioners in the United States, of three in Canada, and of one in an unaccredited locality, to the following queries:

"1. What is your opinion in regard to the local or constitutional nature and treatment of diphtheria?

"2. On what clinical facts observed by you do you base your opinion?

"3. What is your opinion as to the contagiousness of diphtheria?

"4. What facts in your experience bearing upon this question?

"5. What microscopic examination, if any, have you made of the diphtheritic membrane?

"6. What measures, if any, have you adopted by way of prophylaxis, and what success has attended those efforts?

"7. What local treatment have you found most efficacious?

"8. What general treatment has been most successful in your hands?"

The replies are in many instances as vague as the questions, and embody views almost as diverse as the localities whence they come. This does not, however, relieve in the slightest degree the sense of annoyance produced by one hundred and eight repetitions of more or less concisely expressed opinions upon the same subject,—an iteration altogether beyond that to which it has grown customary to apply an adjective by no means polite. Nor is the editor's summary of this scattering vote altogether satisfactory. It seems an expression of his personal views of the matter rather than those of the majority represented. The result would have been by far more valuable if the questions had been so framed as to accumulate *observed facts* rather than *mere opinions*. No one would expect to obtain satisfactory knowledge of the depth of a body of water by questioning the men composing the crew of a ship sailing it. The man heaving the lead would know, but the others would be able only to guess at it. Moreover, the depth is not everywhere the same. To consult the charts of the coast survey would give

definite information. Where no such charts exist, or where they are incomplete, it behooves those interested to collect with all diligence the facts (not any man's opinion) with which to construct them. The etiology and pathology of diphtheria are yet involved in the most dense obscurity. Laborious research, conducted in the spirit of science, proceeding step by step, alone is capable of the solution of such questions. That is not the method pursued in the investigation of which this volume is the record. If ten times one hundred and eight practitioners had contributed to it, the advancement of knowledge would have been just the same. J. C. W.

A DICTIONARY OF THE ENGLISH LANGUAGE. By JOSEPH E. WORCESTER, LL.D. New Edition, with Supplement. Philadelphia, J. B. Lippincott & Co., 1883. Quarto, pp. 2058.

Worcester's Dictionary of the English Language, which in the recent edition is the most complete ever published, as a work of reference is thorough, accurate, and trustworthy. It has been adopted as the standard authority for the English language by distinguished men of letters and scholars of this country, by the various departments of our national government, and by the great newspapers. The present edition of this classical work contains over a hundred thousand words, twenty thousand more than any preceding work of the kind, its definitions are clear, satisfactory, and concise, it is well printed and amply illustrated. It also contains chapters upon Principles of Pronunciation; Orthography; English Grammar; Origin, Formation, and Etymology of the English Language; Archaisms, Provincialisms, and Americanisms; History of English Lexicography; Pronunciation of Greek and Latin Proper Names; Scripture Proper Names; Modern Geographical Names; Names of Distinguished Men of Modern Times; Abbreviations used in Writing and Printing; Words, Phrases, and Quotations from the Greek, Latin, French, Italian, and Spanish Languages; and a Supplement, with Additional Vocabulary and Synonymes. At the present time, when a special effort is being made to sell dictionaries to professional men, we think it proper to call the attention of physicians to the importance of having a copy of "the Standard English Dictionary" for reference in all cases of doubt or dispute as to orthography, orthoëpy, or definition. For professional men there is no rival to Worcester; without it no library is complete; with it other English dictionaries are, for ordinary use, superfluous.

A TREATISE ON THERAPEUTICS. By H. C. WOOD. Fifth Edition. Philadelphia, J. B. Lippincott & Co., 1883.

This work has been in its successive editions so thoroughly reviewed in these columns

that we cannot accord more space than is necessary for the announcement of the rapidly succeeding revisions: indeed, latterly the editions come so fast that they seem like a succession of dissolving views. Although all parts of it have been brought up to the latest dates, the chief alteration in the present volume, compared with its predecessor, is the adaptation to the Pharmacopœia of 1880.

INSANITY CONSIDERED IN ITS MEDICO-LEGAL RELATIONS. By T. R. BUCKHAM, A.M., M.D. Philadelphia, J. B. Lippincott & Co., 1883.

This rather odd and interesting book opens with an introductory chapter which is very consoling to the medical man who has been berated by some legal opponent, because it shows what a chaotic mass of contradictions and foolishness is the law, as enunciated from the lips of its judges. This Introduction portrays, indeed, the failure of the pure psychical theory of insanity, but is also largely composed of pithy condensations of judicial opinions, which are given more fully and with full references in the Appendix.

Chapters ii., iii., and iv. are respectively devoted to the discussion of—first, the “physical media” theory,—*i.e.*, the theory that the mind is an incorporeal or distinct essence working through a physical medium the brain, and that insanity is due to disorder of this instrument; second, the “somatic or materialistic” theory, that thought is a brain-secretion; third, the “intermediate” theory of Wharton and Stillé. We agree with Dr. Buckham that the exact nature of the latter theory—the exact meaning of Wharton and Stillé—is hard to make out; but either Dr. Buckham or ourselves have failed to grasp it, for his many pages seem to us not exactly to the point.

We must confess to weariness and distaste for these discussions, which must always end, to our thinking, where they start, because they are concerning that which is beyond the limits of human science. If a man's nature, education, belief, or what not, make him a materialist, he will believe in the somatic theory of mind, whereas if he start from a Christian stand-point he will believe in some form the physical media theory. The practical outcome is merely that we can know mind only through matter, and that an insane man is one with a perverted brain.

The early part of the fifth chapter of the book ought to be read aloud by the crier in every criminal and civil court in the land, and committed in extracts to memory by every Governor: then might we hope to see expert testimony less farcical than it now is. The following extract will show the drift of this chapter:

“Judges ought to know, lawyers ought to know, and the public ought to know that general medical practitioners, however able and

deserving of confidence they may be as such, are not experts in insanity; that no amount of general will compensate for the want of special knowledge; that they know no more respecting insanity than any equally well educated person outside the profession of medicine, and to the practice of using such physicians as experts is due largely the disgraceful character of the verdicts in every trial in which insanity is an element.”

In America there is always a tendency to worship the man whose work is palpable, and the surgeon has blood, legs, arms, and what not, to show for his labor, so that he is glorified by the crowd. It would perhaps be too much to expect the average surgeon not to share the popular prejudice as to his own superiority, but we once did hear a *great* surgeon say in court that because he was a surgeon therefore was he not a neurologist. Most numerous are, however, the little surgeons: so now, when in this city an insane commission is to be appointed, or an opinion to be delivered as to mental capacity, to the front goes the man of the dissecting-room and the surgical ward, and the hewer of flesh essays to be the gauger of intellect.

The latter portions of the fourth chapter are occupied with an elaborate and very able discussion of the question whether the expert or the judge should decide the question as to the sanity or insanity. It is clearly shown that common sense lays the responsibility upon the expert, but it is equally apparent, especially from the pages of Wharton and Stillé, as reproduced in the foot-notes, that under our present system of trial it would not be proper to take away the power and responsibility from the judges. We agree with our author that our whole system of trial is an abomination and ought to be reformed. Whether or not the elaborate scheme he suggests would be practicable, this is scarcely the place to discuss.

H. C. W.

ARCHIVES OF OPHTHALMOLOGY. Edited by Dr. H. KNAPP, of New York, and Dr. C. SCHWEIGGER, of Berlin. Vol. XII., Nos. 3 and 4. New York, G. P. Putnam's Sons, 1883.

Numbers 3 and 4 of this well-known journal appear in one publication, completing vol. xii. Thirteen original articles are contributed, the last one being the usual ophthalmic summary so essential to all who wish to keep pace with the progress of ophthalmology. The remaining articles may be thus classified: 1. Brief ophthalmic studies: (a) On the Representations of the Limits of the Visual Field, by Hilbert, of Königsberg. This paper has reference to the imperfect representations of the visual field afforded by the ordinary perimetric chart, and offers formulæ by means of which the latter may be transformed into a field such as would be obtained by the ordinary black-board. (b) The Focal Line in Astigmatism.

In this paper Dr. Swan Burnett calls attention to the error of applying the term focal plane to a plane supposed to pass through a focal line of an astigmatic system, and develops the distinction which exists between corneal astigmatism and the astigmatism of a system composed of a spherical and cylindrical lens. (c) Interchange of Liquids within the Eye, as shown by Injections of Fluoresceine, by Ulrich, of Strasburg. Dr. Ulrich contributes the results of some additional investigation with fluoresceine, and offers an explanation of the formation of the vertical line of Ehrlich. 2. Reports of Cases: (a) Tubercular Tumor of Choroid, by Swan Burnett, M.D. The removal of the eyeball in this case was followed by induration and softening in front of the ear of the same side, induration of the cervical lymphatics, ulceration of the conjunctiva, death apparently from phthisis. Drawings showing a longitudinal section of the eyeball and the microscopic appearances illustrate the paper. (b) Wound of Eye by a Cross-Gun Missile, by Webster, of New York. In this case there was found a cystoid cavity in the iris. (c) Eye Symptoms of a Case of Glioma Sarcoma in the Left Occipital Lobe, by Tany, of Breslau. Dr. Tany is inclined to refer the defect of the visual fields in this case to the lesion of the cortex of the left occipital lobe; it seems to us that he lays too much stress on this defect in his paper, as it cannot be regarded as a pure instance of right hemianopia. (d) Ectopia of the Eyeball induced by Orbital Osteophytes, by Birnbacher, of Grätz. This is a rare case, well reported. (e) An Anomaly of the Optic Nerve, by Purtschen, of Klagenfurth. This anomaly consists in an elevation of a sector of the optic nerve. We suppose all careful observers have recognized this anomaly. 3. Elaborate clinical studies: These are The Eye-Disturbances in Tabes Dorsalis, by Schmeichler, The Relations between Cerebral and Ocular Disease, by Nieden, Ocular Lesions after Injuries of the Brain and Spinal Marrow, by Nieden, Neurasthenia, by Wilbrand, of Hamburg. We hope to give abstracts of these papers in the next ophthalmic report, and defer critical notice of them for the present. All the articles referred to in this notice will be read with interest, and we commend those under the third heading to the attention of those practitioners who are accustomed to employ the ophthalmoscope as an aid in the diagnosis of disease. H.

A MANUAL OF PRACTICAL HYGIENE. By EDMUND A. PARKES, M.D., F.R.S. Edited by F. S. B. F. DE CHAUMONT, M.D., F.R.S. Sixth Edition, with an Appendix by F. N. OWEN. Vol. I. New York, William Wood & Co.

This new edition comes to us in the form of the September number of Wood's Medical Library. The work has been so long and so favorably known that but little is left to critics

but to repeat the encomiums which have been bestowed upon previous editions. The public interest in questions of preventive medicine is undoubtedly rapidly increasing: all departments of the science are being placed on a scientific basis, and the right of the State to preserve the public health by measures as summary as those by which it preserves public morals is gradually being acknowledged. On every side we see the tendency to appoint State Boards of Health, State chemists, and other official care-takers. We may regard this tendency as to a certain extent a reaction from the indifference with which public hygiene has long been regarded, and also a result of the recent developments in the theories of the origin and development of disease.

Under these circumstances the work of Parkes becomes especially valuable. Its author was a man of large practical experience and sound common sense. Every page of the work shows a disposition to avoid that sensational spirit which has been often displayed in the literature of hygiene. The first volume is devoted to the subject of water, air, food, and soils, principally considered in reference to civilian life; the discussion of military hygiene is deferred to the second volume. One hundred and eleven pages are devoted to water, and all the recognized methods of chemical and microscopical analysis are given. The preference is given, naturally, to Wanklyn's ammonia process, which has won of late years so much favor among water-analysts on account of its simplicity and the supposed trustworthiness of the data it affords. Very recent investigations have, however, somewhat altered its standing, and at the present time chemists may be said to be without any definite method of determining the potability of a water. The question is, indeed, largely an engineering problem.

In the department on food we notice that the sensible view is expressed that the butter-substitutes—*e.g.*, butterine—are not hurtful. A statement like this from high authority will go far towards upsetting the sensationalism which has been attached to this subject.

Concerning the topic of alcoholic beverages the language of the work is clear and positive, and the questions as to the effects of alcohol on the human system are discussed thoroughly. The array of facts presented leaves no doubt of the inadvisability of the use of even small quantities of alcohol as a part of our regular diet.

It is scarcely necessary to allude to the general fulness and accuracy of detail which characterizes all parts of the volume. It is a complete manual of hygiene, suitable both for student and for practitioner. Very few typographical errors occur. We notice a few: for instance, in Plate VI., Figure 1 should be 1'.

The general execution of the work is of good quality, the plates and cuts are well printed, and the type is clear. H. L.

GLEANINGS FROM EXCHANGES.

SUCCESSFUL RESECTION OF THE PYLORUS.

—The *Wiener Medicinische Wochenschrift* (Nos. 23 and 24) contains an account of a successful resection of the pylorus, and some observations on a gastroscopic symptom of cancer of the stomach, by Professor Mikulicz, of Cracow. The patient was a peasant, 25 years of age, the mother of three healthy children. Up to five months previously she had been in perfect health, but since that time had suffered from bad appetite, and discomfort and pain in the stomach occurring some hours after food. For the last three months she had, in addition, suffered from repeated vomiting. On admission to the Cracow Hospital, on February 9, 1883, her condition was as follows. Nutrition fairly good; skin and mucous membranes pale; both breasts swollen, red, and painful to pressure (the patient having only just weaned her last child), but not diseased; abdomen somewhat distended; abdominal walls thin; in the epigastric region a hard, apparently movable tumor, the size of a goose's egg, and painful to pressure, was made out. The stomach was considerably distended, its lower border reaching to three fingers' breadth below the navel. Bowels constipated; urine normal. The diagnosis of carcinomatous stricture of the pylorus was made. For the two days preceding the operation, which was performed on February 22, the patient had only fluid diet, and immediately before it the stomach was washed out with warm water. The operation was performed in the usual manner, and lasted two hours and a half. The tumor was freely movable. No spray was used, and iodoform dressing without drainage was employed. The portion removed measured three inches in length, and included, of course, the pyloric opening, which was found to be so narrowed that a little finger could scarcely be passed through it. Microscopic examination showed the growth to be a colloid cancer. An enlarged lymphatic gland removed at the same time showed no trace of cancer-elements. There was very little shock after the operation, the pulse the same evening being 72, and the temperature 98.5°. On the evening of the second day the patient vomited twice, and several times on the third, fourth, and fifth days; but on the sixth day the vomiting ceased. The vomited matter consisted each time of mucus without any admixture of bile. The pulse and temperature remained normal throughout, except on the fifth day, when the temperature reached 103.5° and the pulse 112, and on the evening of that day the patient had an offensive diarrhœa. During the first five days she took cold water by the mouth, and was fed by the rectum with peptonized enemata. On the sixth day she had soup and eggs, and on the eighth solid food. On the twentieth day the dimensions of the

stomach were normal, and the patient suffered from no gastric troubles. On March 22, the twenty-eighth day after the operation, she left the hospital in good health.

From a consideration of the absence of all signs of peritonitis in the case, from the course which the wound took, healing by first intention, from the considerable dilatation of the stomach that existed from the third to the fifth day, and from the character of the vomited matter, Mikulicz considers that the vomiting was due to a complete but temporary obstruction of the new pyloric orifice. The cause of the obstruction he thinks might have been due to an inflammatory swelling of the wound at the pylorus, or the dilatation of the stomach and the weakness of its walls might be insufficient to propel the contents through the new orifice. According to Mikulicz, thirty-two cases of resection of the pylorus have been published, of which twenty-four ended fatally and eight recovered. Of the eight successful cases, two were operated upon for ulcer of the stomach, and six for cancer. Of the twenty-four unsuccessful cases, twenty-three were for cancer, and one for ulcer. In twenty-one of the twenty-four fatal cases the cause of death is given. Fifteen died of collapse, one of inanition, and five of peritonitis,—the peritonitis in two cases being due to perforation at the seat of union, and in two cases to gangrene of the transverse colon. These four fatal cases of peritonitis, and the case of inanition, were due to causes which at the present time might be avoided. The large number of cases which died of collapse, Mikulicz considers with Billroth to be due to the general marasmic condition of the patients, and to the severity of the operation in those cases where the tumor was large and had formed adhesions to neighboring parts. Only cases where the patient is well nourished, and the tumor of moderate size and movable, are, he considers, suitable for operation. The future of resection of the pylorus depends, he holds, on improvement in the diagnosis of cancer of the stomach at an early stage, and he looks to the general use of the "gastroscope" as likely to afford valuable aid in that direction. In a large number of cases of cancer of the stomach examined by him he has found certain appearances and symptoms which may be of use in diagnosis. In a healthy man, the pylorus, examined "gastroscopically," appears as a longitudinal, oval, or triangular slit, or as a circular opening surrounded by close, bright-red mucous projections and folds. Owing to the irritation caused by the instrument and to the inflation, the opening is continually changing its shape, and the folds moving with each contraction of the muscular wall. The fundus of the stomach, on the contrary, remains stationary. In cases of cancer of the stomach he has noticed that the coarse folds are either entirely wanting, the walls being quite smooth,

or are only slightly marked; and, secondly, that the movements are altogether wanting. Also in certain cases he has noticed considerable pallor of the pylorus; in others quite a dark cyanotic appearance. In one case the submucous veins were dilated, and of a deep-blue color. No ulceration of the cancerous mass has he ever seen. The explanation of these changes he considers to be that, the walls of the stomach being infiltrated by cancer, the movable organ is changed into a comparatively rigid tube, in which the formation of folds and the changes in shape cannot occur.—*Medical Times and Gazette*.

TWO CASES OF ABSINTHE-POISONING.—Dr. Albert S. Adler, of Lordsburg, New Mexico, writes, "A few nights ago I was called upon to attend two individuals who had been drinking heavily and were now in convulsions. Hastening to their place of abode, I found one of the patients, a woman, in an epileptiform convulsion,—unconscious, small pupils, and frequent and small pulse. The other was also unconscious, but not then in spasms. All questions in regard to poisoning were altogether refuted by the other inmates of the house. I was about to resort to some stronger means in order to relieve their sufferings, when the young girl, returning suddenly to complete consciousness, claimed that she and her male friend had partaken of over a quart of some alcoholic liquor, the principal part of which was absinthium. The epileptic convulsions had commenced half an hour prior to my arrival, and, as before stated, lasted in the girl but a short time during my presence: they had been more vehement and frequent in her, because she had taken a larger quantity. The man was restored to his senses by slapping his face with wet towels. These cases of epilepsy are of more frequent occurrence than generally supposed. Magnan ('De l'alcoolisme, des divers formes du délire alcoolique,' etc., Paris, 1874, and *Annal. Méd. Psych.*, 1874, page 302) was the first to describe the danger of absinthe-drinking. His experiments on animals, as well as observations on man, have demonstrated that it was not the alcohol which brought forth the spasms, but that the absinthium was the source of the vehement symptoms. Alcohol occasions delirium and tremor, absinthium these two and epilepsy in acute alcoholism. Small doses of wormwood given to animals have the effect of producing tremor of the muscular system, dizziness, and in a surprising manner upstarts of individual muscles, in larger doses a completely-formed epilepsy. In man, besides the alcoholic delirium, epilepsy is noticed. Among three hundred and seventy-seven persons addicted to the use of alcohol, Magnan found, in 1870, but thirty-one epileptic cases, and in 1871, among two hundred and ninety-one, only fifteen. In France it is regarded by the legal authorities as a poison, and only allowed to be sold in drug-

shops. Magnan comes to the conclusion that if epileptic attacks happen in acute alcoholic poisoning, it was only in absinthe-drinkers, and that acute alcoholism without epilepsy, but with tremor of any degree, was seen only in persons partaking freely of wine or whiskey."—*Medical Record*.

LYMPHO-SARCOMA.—A number of specimens illustrating a malignant form of Hodgkin's disease were exhibited by Dr. Carrington at a recent meeting of the Pathological Society of London. The patient, a woman, aged 55, had died in Guy's Hospital under the care of Dr. Goodhart. She stated that she had first noticed swelling of the glands on the left side of the neck in June, 1882; in August following, the legs and abdomen became swollen. When admitted, on February 7, 1883, she was very anæmic and emaciated, and the subcutaneous tissues were generally œdematous; the cervical, submaxillary, axillary, and inguinal glands were enlarged; the spleen was very large, reaching as low as the crista ili. An examination of the blood showed that there were about 4,720,000 red corpuscles to the cubic millimetre, and about 4.3 white corpuscles to every thousand red corpuscles. A week after her admission she was seized with palpitation; there was no fever, but the urine was found to contain a trace of albumen, and the patient died the same day. At the post-mortem examination, in addition to the great enlargement of the superficial glands noted during life, the mediastinal glands were found to be enormously enlarged, extending along the bronchi into the lung, but not involving the pulmonary tissues. The stomach was studded, on its mucous surface, with numerous cream-like flattened tumors; the pyloric orifice was involved, but the duodenum was free from disease. The valvulæ conniventes of the small intestine below the duodenum began to show disease, being firmer than natural, and swollen; lower down they became polypoid and creamy. The solitary glands and Peyer's patches were enormously swollen; the cæcum contained a mass of growth that weighed half a pound; the spleen, though greatly enlarged, and weighing forty-four ounces, retained its natural form, and it was everywhere permeated by a soft new growth. Microscopic examination of the growth showed it to be of a lymphomatous nature. Dr. Carrington had been able to find only four similar cases recorded in the Transactions of the Society. The president considered the case to be of great interest; he had never seen a similar one. Dr. Pye Smith referred to a case of this kind recorded by Dr. Behier about twenty years ago, which was, he believed, the earliest on record; it was a case of lymphatic overgrowth of the lymphatic structures of the intestinal canal. Dr. Sydney Coupland observed that an instance of this disease had

been preserved by Cruveilhier in his Atlas; it was probably the earliest case of which any note remained.—*British Medical Journal*.

HAMMOND ON SPASMODIC STRICTURE.—Referring to the peculiar condition which Sir James Paget has called stammering of the bladder, Dr. Wm. A. Hammond gives an interesting reminiscence. He says,—

"It is undoubtedly due to a spasm of the organic muscular fibres of the urethra and of the compressor urethræ muscle. It is exactly similar to the condition sometimes excited in nervous individuals by attempts to pass a bougie. The canal closes tightly against the point of the instrument, but a steady gentle pressure continued for a few minutes usually overcomes the obstruction. The remarkable fact, one which all physicians and surgeons have observed, is that the condition should be excited by mental influences and certain associations of ideas. I have known men who could not urinate when asked to do so, unless the water above the urinal were allowed to run at the same time, so that the idea of a flowing stream should be excited in their minds. The fact is common enough, and it is one well known to people generally. I recollect when a college boy being witness to a wager between two men that one of them could not urinate in the other's hat. A ring of curious spectators was formed around the individual desirous of exhibiting his powers of urination; he had a full bladder, he said; he prepared himself, held the hat of his adversary in his hand, but not a drop would come, and the more the lookers-on laughed and cheered, and the more he strained, the less real ability he seemed to exhibit. At last the referee announced that the time, a half an hour, was up, and he lost his bet without having passed a single drop. Five minutes afterwards, in the solitude of a woody lane, he evacuated over a pint."—*New York Medical Gazette*.

ERYTHRASMA.—In his service at the Hospital St. Louis, Dr. Ernest Besnier showed a patient affected with a disease little known and yet somewhat frequent, and which may easily give rise to errors in interpreting it. It consists of spots having the appearance of intertrigo, but presenting a certain amount of pigmentation. The spots are more or less rounded, or in the form of disks, and occupy at times quite an extensive surface. They are seated in the axillæ, groins, scrotum, and chiefly at all those points where intertrigo occurs. In those parts which are outside of folds they present a pale-red color, which has given the disease its name,—erythrasma. There is but little itching, without intense reaction, and it is on this account that it is seldom observed, the patients not attaching sufficient importance to it to occupy themselves about it. The author considers it a parasitic disease, whose

parasite, of an extraordinary tenuity, can only be observed by means of an objective by immersion, and called *Microsporon minutissimum*. Histological examination shows that in the horny layer of the epidermis there is contained a very large number of these cryptogamic elements. The coloration of the spots is due not only to the extreme abundance of the parasite which infiltrates this layer, but also to the presence of pigment-granules mixed with spores, which is the result of cutaneous irritation, and of chronic pruritus also. The affection is not a grave one, yet it is important to recognize it, and not to mistake it for pityriasis versicolor, to which it bears some similarity.—*Medical Review*.

PROLONGED SUSPENSION OF VITALITY FOLLOWING THE HYPODERMIC INJECTION OF MORPHIA AND ATROPIA.—A woman, 37 years of age, upon whom an operation had been performed for the removal of the left ovary, at noon, four days after the operation, became very excited and disturbed the dressings of the wound, when twelve minims of the hospital solution of morphia and atropine were injected. This represented three-fifths of a grain of morphia and one-fortieth of a grain of atropine. At one o'clock she became livid, and the nurse by mistake injected another five minims of the solution before the house-surgeon arrived. When he came, he injected ammonia, gave brandy enemata, used artificial respiration, and applied electricity, without effect. At 4 P.M. the nurse was laying the woman out, but the doctor came in and determined to proceed with artificial respiration, galvanism, and frictions. Up to 5.30 P.M. only a spasmodic breath every quarter of an hour, and a feeble beat of the pulse every now and then, could be detected. At 7 P.M. a nurse poured some coffee into the patient's mouth, and she suddenly fell back as if dead, but by turning her over on her side she was made to vomit. By nine o'clock the respirations were beginning to be more frequent and the pulse stronger; she soon became conscious after this, and recovered perfectly.—Dr. Alexander, in the *Boston Medical and Surgical Journal*.

TRANSIENT ANÆSTHESIA WITH BROMIDE OF ETHYL FOR MINOR OPERATIONS.—Dr. A. E. Prince, of Jacksonville, Illinois, recommends ethyl bromide, not as a substitute for chloroform and ether, but for its primary effect, it having a period of primary anæsthesia extending from fifteen seconds to two minutes. This makes it of special value for short operations, such as pulling teeth, opening a felon, stretching the sphincter ani, or for diagnosis, and, if the effect is desired to be continued, chloroform or ether may be used. It is as a substitute for nitrous oxide gas that he especially prizes the ethyl bromide.—*St. Louis Medical and Surgical Journal*, October, 1883.

LOCOMOTOR ATAXY NOT TABES DORSALIS.—Matters seem to have rapidly reached a height towards which they have for some time been tending. Before recent years it was something to know that locomotor ataxy was associated with, if not caused by, posterior sclerosis. A fresh and important step in advance, for which we are indebted to Pierret, was made when that able observer declared that the only region sclerosis of which was necessary for the production of the signs of locomotor ataxy was the postero-external column, or "root-zone" of Charcot. Many clinical investigators have shown that the most characteristic symptom of "tabes dorsalis" may be long or even altogether absent,—that the awkward gait might never make its appearance. Coetaneously with the propagation of these doctrines,—by Buzzard, Gowers, and others,—Pierret, and afterwards Déjérine, were upholding the doctrine that most, if not all, the symptoms of "tabes dorsalis" might be due to multiple peripheral neuritis. In a partially successful case of nerve-stretching for locomotor ataxy by Langenbuch, the patient died at a second operation, apparently from the administration of chloroform. It was found that no changes existed in the spinal cord. Though the peripheral nerves do not seem to have been examined, the instance is of importance in the light of the latest researches of Déjérine. Disturbances of sensation and disorders of locomotion, apparently absolutely identical with the signs of classical tabes dorsalis, have now (*La France Médicale*, October 30) conclusively been shown to have existed in two cases in which the spinal cord, spinal roots and ganglia were perfectly healthy, but in which the peripheral nerves exhibited the changes ascribed to atrophic parenchymatous neuritis.—*Lancet*.

MISCELLANY.

A STRANGE BEQUEST.—*The Medical Press* details the sad circumstances attending the death of M. I. Khan, M.R.C.S., of University College Hospital, who committed suicide by taking poison. The deceased was an Afghan, who, after successfully pursuing medical studies in England, and obtaining a double qualification, found his color and nationality a bar to obtaining employment there, and, growing discouraged by disappointment, and being without resources, he at length put an end to his life. In a letter addressed to the coroner Mr. Khan expounds his views as to suicide, which he justifies in himself; and then makes a strange bequest of his body for dissection at University College, a request being added that his skeleton shall be preserved in the museum.

The story is a very sad one, and if, as is said to be the case, the offer of the deceased is accepted by University College, his skeleton will be not the least interesting object in the collection.

BENZOPHENID.—In a recent trade report Messrs. Gehe state that they have taken an opportunity, while saturating a large quantity of benzoic acid sublimed from resin, to isolate the adherent body, upon the presence of which depends the brown color that is now one of the official characters of benzoic acid in the German Pharmacopœia. It is believed to be "benzophenid," and when treated with alkalis breaks up into benzoic acid and phenol (*Pharmaceutical Journal*, September 29). Some physiological experiments made with the substance by Dr. Robert, of Strasburg, seemed to show, however, that a similar decomposition does not take place in the body when benzophenid is administered internally; at least, no increase of phenol has been detected in the urine; in this behavior it resembles chloral hydrate, which does not yield chloroform. Rabbits did not appear to be affected by it when administered in doses of ten grammes, and an alcoholic solution injected under the skin of a frog produced no perceptible symptoms.—*Lancet*.

FATAL HEMORRHAGE FOLLOWING EXTRACTION OF A TOOTH.—A young man, 26 years of age, of English birth, had the right superior second molar tooth extracted on account of its badly-decayed condition. Constant oozing from the socket followed, and the patient died on the eighth day. He had had teeth drawn previously without serious hemorrhage. The family history showed a marked hemorrhagic diathesis, confined to male members, his father, two uncles, and a cousin having died of hemorrhages from wounds. The patient refused medical or surgical treatment on conscientious grounds, as he was of the Mormon faith, or his life might have been saved.—*The Dental Cosmos*, November.

SUPPRESSION OF QUACKERY.—At the annual meeting of the New York County Medical Society, held October 22, the sum of three thousand five hundred dollars was appropriated for use during the ensuing year in prosecuting illegal practitioners. The report of the proceedings of last year showed that the proper officers of the Society had performed their unwelcome and often disagreeable task with satisfaction, and had found, with few exceptions, that they had the co-operation of the court in carrying out the law.

SALICYLIC ACID PASTE IN ECZEMA.—

℞ Acidi salicylici, gr. x;
Petroleol., ℥iv;
Pulv. zinci oxidi,
Pulv. amyli, āā ℥ij. M.

Rub up into a smooth paste.

VAN HARLINGEN.

GOOD ADVICE, BY THE EDITOR OF *The Planet*.—Life may be taken away at any moment, even while we are sitting in our room, where we would think death could not possibly reach us. Property may be lost by fire, insurance only partially remunerating us; but as regards money, good management evidently may save from ruin; but how many people conceive what constitutes good management? Speculation and extravagance in living are our two pursuing devils, who are ever seeking for whom they can devour.

If we are to remain with our confrères and live, let us attend to our church duties, to rules of hygiene and temperance, let us curb our tempers, try to be agreeable towards everybody, bring up the family in decency and propriety, and, lastly, avoid extravagance.—*The Planet*, November 15.

NOTES AND QUERIES.

THE BALTIMORE CORRESPONDENT'S ANSWER.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

SIR,—I have just returned to this city, after a month's absence, and find, on looking over late numbers of the *Times*, that my letter on "Medical Education in Baltimore" has given great offence in a certain quarter. Had Drs. Monroe and Byrd, in replying to my strictures on the methods of the Baltimore Medical College, confined themselves to correcting alleged misrepresentations, the necessity for writing this letter would not have arisen; for the article in the Educational Number of the *Times* contained no misrepresentations.

In the letters of Drs. Monroe and Byrd, however (*Times*, November 3, p. 118), appear several statements which demand my attention, inasmuch as they call in question my veracity and reliability as a correspondent of such a reputable journal as the *Times*, and hence I ask sufficient space to place the institution defended with such wealth of quotation and lavish display of italics by Dr. Byrd in its proper light.

Dr. Monroe says the Baltimore Medical College was organized to graduate a superior class of doctors,—to quote the words of the catalogue, "Not to make many doctors, but good and competent ones;"—and then goes on to enumerate the methods by which this result shall be attained.

In this connection, I would merely remark that certain circumstances which have come to my knowledge have convinced me that they have not met with any marked degree of success in carrying out their high ambition.

Dr. Byrd objects to my statement that the members of the faculty of this institution "should likewise be professors of Christianity." He says that the charter "requires that all its professors and teachers shall declare their belief in the Christian religion ere entering upon their respective duties." I can really see no difference in meaning between the two versions, except that mine seems the clearer statement.

Drs. Monroe and Byrd both deny that the establishment of a pulpit was contemplated. My information was derived from the only morning paper here which thought it matter of sufficient interest to notice the last introductory exercises. The report, so far as I was aware, had not been contradicted.

And now, with reference to the number of graduates of the Baltimore Medical College practising in West Virginia. Drs. Monroe and Byrd both know—in spite of their assertion to the contrary—that only one of the graduates of this school is practising in that State by warrant of law, and he not by virtue of his diploma. If any other graduates of the Baltimore Medical College are practising medicine in that State, they are doing so surreptitiously and in defiance of the law. Drs. Monroe and Byrd know these facts as well as I do.

Dr. Byrd accuses me of "absolute falsehood;" I have shown that my statements were but the exact truth. I can assure Dr. Byrd that denouncing a statement as untrue does not make it so; and, if he will accept a little advice from me, I would suggest to him to be sure of his own facts before he again undertakes to question the accuracy of those of

GEORGE H. ROHÉ.

BALTIMORE, November 24, 1883.

RESOLUTIONS UPON THE DEATH OF DR. J. MARION SIMS.

"At a called meeting of the Faculty of the Baltimore Medical College, held on the 27th of November ultimo, the following preamble and resolutions were offered by Prof. Harvey L. Byrd, and adopted unanimously,—viz.:

"Whereas, We have learned with profound sorrow and deep regret of the death of Dr. James Marion Sims, which sad event occurred in New York City on the 13th instant;

"And whereas, It behooves us as a corporation and as individuals to bear testimony to his brilliant career and great achievements, which have enriched the profession of medicine so much, especially in the knowledge and skill he so successfully applied for the relief of suffering womankind; be it, therefore,

"Resolved, That we deplore the decree of our Heavenly Father which called from the midst of the living James Marion Sims, and from the profession which he so much honored, and thus stilled forever the cunning hand that had wrought relief to so many suffering women in both hemispheres.

"Resolved, That these proceedings be spread upon the minutes of this meeting, and that a blank page of the records of this corporation be inscribed with his name and the dates of his birth and death; and that a copy of the foregoing be forwarded to his bereaved family, with the assurance of our sincere sympathy and condolence in their irreparable loss.

"Resolved, That the editors of the *Medical Record* and the *Philadelphia Medical Times* be respectfully requested to publish the same."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 24 TO DECEMBER 8, 1883.

WOLVERTON, WILLIAM D., MAJOR AND SURGEON.—Assigned to duty as post surgeon at Washington Barracks, D.C. Paragraph 7, S. O. 222, Department of the East, November 27, 1883.

BROWN, PAUL R., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty in the Department of Arizona. Paragraph 4, S. O. 273, A. G. O., November 28, 1883.

CARTER, W. F., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Washington Barracks, D.C., to take effect at the expiration of his present leave of absence, and assigned to duty at Little Rock Barracks, Arkansas. Paragraph 4, S. O. 224, Department of the East, November 30, 1883.

MERRILL, JAMES C., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio. Paragraph 4, S. O. 270, A. G. O., November 24, 1883.

SHUFELDT, R. W., CAPTAIN AND ASSISTANT-SURGEON.—Now on sick-leave, relieved from duty at Jackson Barracks, New Orleans, Louisiana. Paragraph 3, S. O. 224, Department of the East, November 30, 1883.

BREWSTER, WILLIAM B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Extension of leave of absence granted September 15, 1883, further extended two months. Paragraph 4, S. O. 271, A. G. O., November 26, 1883.

MADDOX, THOMAS J. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months. S. O. 136, Department of the Missouri, November 24, 1883.

RICHARD, CHARLES, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Jackson Barracks, New Orleans, Louisiana. Paragraph 2, S. O. 224, Department of the East, November 30, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM NOVEMBER 24 TO DECEMBER 8, 1883.

Medical Inspector D. KINDLEBERGER to be relieved from duty on the Retiring Board on December 9.

Medical Inspector D. KINDLEBERGER ordered to the U.S. steam-ship "Hartford," Pacific Station, per steamer of the 10th inst.

Medical Director A. L. GHON detached from duty as member of Board of Inspection and Survey on the 15th inst., and placed on waiting orders.

Medical Director GEORGE PECK ordered to report on the 15th inst. as member of the Board of Inspection and Survey.

PHILADELPHIA, DECEMBER 29, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON REMOVAL OF THE OVARIES FOR MENORRHAGIA—OÖPHO- RECTOMY FOR CONFIRMED MAS- TURBATION—OVARİOTOMY FOL- LOWED BY ABSCESS IN THE ABDOMINAL WALL—CRIMINAL ABORTION—PROLAPSE OF THE UTERUS WITH PROLAPSE OF ONE OVARY.

Delivered at the Hospital of the University of Pennsylvania, October 3, 1883,

BY WILLIAM GOODELL, M.D.,

Professor of Gynecology in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

REMOVAL OF THE OVARIES FOR MENORRHAGIA.

GENTLEMEN,—This patient has suffered from excessive menorrhagia and from severe ovarian pains and aches. She had been attended by many physicians, and at last she came to me to see what I could do for her. I tried various modes of treatment, but with very little benefit. I finally removed the ovaries, eleven days ago; and I bring the patient before you to-day that you may see her condition. She was very much reduced in strength before the operation, but she has not had a single bad symptom. The great majority of these cases that I see are so worn out that they are nothing but skin and bone, and they have not the resiliency and strength to endure the operation as they would have if not quite so much reduced. Yet I prefer a certain amount of emaciation, for then the opening in the abdominal wall is not so deep.

I now show you the wound at the end of eleven days. The operation was done with every antiseptic precaution. It was done under the spray; the instruments were immersed in a solution of carbolic acid, the sponges in the same, and every effort was made to obtain cleanliness in all respects. The gentlemen who assisted me had on clean clothing, and had washed themselves very carefully. I make it a point, although I take a bath every morning, to take a soap-bath on the morning that I am going to perform an ovariectomy. This wound has been dressed with gauze which had

been kept for weeks in a solution of one part of crystallized carbolic acid to seven parts of glycerin. The gauze was laid directly on the wound, and over it was placed a pad of cotton which had been baked in the oven; this was secured by a flannel binder. The result has been perfect union.

The operation which was performed in this case was oöphorectomy, which literally means removal of the ovary. It is precisely the same as ovariectomy, but oöphorectomy has been restricted to the removal of ovaries which may or may not have any intrinsic disease, but which are extirpated in order to arrest menstruation. Ovariectomy is limited to the removal of ovaries which are diseased and usually much enlarged. The former operation has also been termed normal ovariectomy,—that is, removal of the normal ovaries for a specific purpose. In this case I did not remove the ovaries because they were diseased, but for the purpose of bringing on the change of life, which in the majority of cases it does. Occasionally menstruation persists after the removal of both ovaries. This is explained on the supposition that in these cases there has been a third ovary, or that all of the ovarian tissue has not been removed, a result which is likely to occur with inexperienced operators.

When do we perform oöphorectomy? It is often employed in pernicious menstruation, which is a generic term covering a great deal. If there is a fibroid tumor of the womb producing an excessive menstrual flow which cannot be checked, we would call such a condition pernicious menstruation. Sometimes epilepsy occurs at the menstrual period, or just before the period; the woman will have hallucinations, or there may be ovarian insanity. These come under the same label of pernicious menstruation. At other times the woman is bedridden, suffering severe pain from the congestion and enlargement of the ovaries. This is another example of the same condition. By the removal of the ovaries relief from these symptoms is in the great majority of cases secured. The operation is still young, and, I think, has been abused, and is in danger of being abused. It requires the utmost caution on the part of the surgeon to decide whether or not to remove the ovaries. The extirpation of these organs does not unsex the

woman in regard to her appearance, to her feelings, or to her place in society; it simply prevents her from having children. There are several cases reported in which both ovaries have been removed by careful surgeons, and yet the woman has, months or years afterwards, given birth to a child. This has most likely been due to the presence of a third ovary, together with its Fallopian tube. I have never met with such a case, but there are numerous instances in which a third ovary or ovarian structure has been found in the broad ligament, apart from the two ovaries.

REMOVAL OF THE OVARIES FOR CONFIRMED MASTURBATION.

Three weeks ago I had this patient before you, and told you before she came in what a sufferer she had been, and told you that I should perform oöphorectomy. The operation was done eighteen days ago. In this patient there was considerable fat, so that, in order to obtain a sufficient opening, the incision had to be extended high up. On the other hand, I do not like to have the patients too thin, because loss of flesh means loss of vital power, and such women are not so likely to survive the operation. There has been since the operation an amelioration of the symptoms, and I think that she will continue to improve. Since last May it has been necessary to employ a catheter. I think that in time she will regain control over her bladder, and this difficulty will be overcome. It is a nerve-symptom, and is due to contraction of the muscular fibres surrounding the urethra.

The operation of oöphorectomy is performed in the following manner: The spray-producer is set about six feet from the patient and the spray directed over the wound, not so as to drop into the wound, but so as to go directly over it and carry away or destroy any germs that may fall from the air. The instruments are placed in a tin pan and covered with a five-per-cent. solution of carbolic acid. Just before the operation, hot water is added, reducing the strength of the solution to two and a half per cent. The sponges are put into a warm solution of the latter strength. The incision is made in the linea alba with considerable boldness until the peritoneum is reached. It is recognized by the overlying fat. All bleeding points are caught with pressure-forceps, and there may be a dozen of these dangling from the wound at one time.

The rule is to stop all bleeding before the peritoneum is opened. A great deal of caution must be exercised in opening the peritoneal cavity. This operation is more difficult than ovariectomy, for the intestines are immediately under the wound. If an intestine were glued to the peritoneum, it might readily be opened. This accident has repeatedly happened. Almost all the gentlemen who perform oöphorectomy have opened the intestine. So far I have not had this accident occur. I open the abdominal cavity in this way: When I get to the peritoneum, which I recognize by its blueness, thinness, and tendency to bulge into the wound, I catch hold of it with a tenaculum. I take a very superficial hold of it, raise it up, and, cutting laterally, make a little nick on one side. In this way I make a minute opening and can see whether or not I am in the abdominal cavity. I then enlarge the opening with a director and scissors, or, as I consider the better way, introduce a finger and cut on it. Having done this, two fingers are passed in, and the position of the fundus of the womb is determined. The fingers, one on each side of the broad ligament, are then passed down, and the ovary is caught between them and brought far enough up to be grasped with the forceps. Sometimes the ovary eludes the fingers; it then has to be caught with the fenestrated polypus forceps. The ovary having been brought to the external wound, the broad ligament is transfixed with a double thread low down, and ligatured on each side. Then the ends of one ligature are brought entirely around the stump and again tied. The stump is caught with a small pair of forceps and the ovary removed. The pedicle is next examined, to see if it is sufficiently long, and whether there is likely to be any bleeding. The same thing is done with the other ovary. I usually pass a sponge into the cavity of the abdomen, to catch any blood that may escape. The ovaries being removed, a small sponge, held by forceps, is passed into Douglas's cul-de-sac, to remove any blood that may be there. In closing the abdominal wound, threads eighteen inches long, armed at each end with a needle, are used. These are kept in a five-per-cent. carbolic acid solution. They are passed from within outwards. This is done for three reasons: 1, if passed from the outside and the patient should happen to cough, the intestine

may be wounded; 2, if the needle become blunted, it may strip off the peritoneum without penetrating it; and, 3, as the peritoneal is the vulnerable surface, it is desirable to have the stitches placed there as neatly as possible. The needles are passed about one-fourth of an inch from the edge of the peritoneum, and about the same distance from the edge of the skin. The mistake which beginners make is to include too much skin. I used to include half an inch. If this is done, the edges do not come into close coaptation, but pucker. While the stitches are being inserted, a sponge is kept in the abdominal cavity, directly under the incision, to prevent blood from getting into the cavity. When all the stitches are in position, the ends on one side are brought together, twisted into a cord, and grasped with forceps. The same thing is done on the opposite side. One finger of each hand is placed in the wound, and the sutures separated. A careful examination is then made to see whether or not there is any collection of blood in Douglas's pouch. All sponges are then removed, and the edges are brought together by pressure, in order to chase out the air, and the sutures are rapidly tied. After tying, the ligatures are cut off, leaving ends an inch and a half long. The wound is dressed with carbolic acid and glycerin, as before described.

The after-treatment consists in giving no food for twenty-four hours. Milk in tablespoonful doses is then cautiously allowed. I tell the patient that if she feels inclined to break wind she is not to restrain herself on account of the presence of any one in the room. The escape of wind from the anus is, in these cases, a most welcome sound. It indicates that the intestines are not paralyzed, that there is no peritonitis, and that there is to be no collection of air in the intestine. Tympanitis is in these patients a very distressing symptom, and sometimes requires the introduction of the catheter into the bowel. (The patient was now removed.)

This, gentleman, was the case of excessive masturbation which I showed you on a former occasion. I told you that to a certain extent the operation was an experiment. She has improved, and is now more calm and placid. I feel pretty sure that if I could have her under my direct control for a month I should cure her of

this habit. I shall watch the case with great interest, and shall report the result in a few weeks.

OVARIOTOMY, WITH ABSCESS OF THE ABDOMINAL WALL.

This third case is one of ovariectomy on which I operated three weeks ago. The wound has healed in every respect but one. This occasionally happens in spite of antiseptic precautions. I refer to the development of little abscesses along the suture-tracts. These heal up rapidly. I used to attribute their formation to the inclusion of the fibres of the recti muscles in the suture, but I do not now think that this is the true explanation. The abscesses are probably due to the bruising of the parts by the pressure-forceps. All of these cases have recovered without a bad symptom. This patient has lost considerable flesh, and, although only 48 years old, looks much older. These furrows about the forehead and lines about the eye are characteristic of the *facies ovariana*. In fibroid tumors this expression of countenance does not exist. There is usually then a brown discoloration of the skin. A woman with a fibroid tumor has also a tendency to become fat, or, at any rate, she is in pretty good condition, and does not emaciate like a case of ovarian tumor. Strange as it may seem, the loss of blood tends to the production of fat, but the fat is of a flabby kind. In some parts of Europe it is the custom of butchers to bleed the calves in order to render the veal white and fat.

In this patient, both ovaries were diseased, and were accordingly removed. Here is a point which is an indication that both ovaries were affected. She has, as you can see, considerable hair on her chin and upper lip. In women past the climacteric, whose ovaries are shrivelled and shrunk, a beard develops; but here is a comparatively young woman who should not have a beard. This is due to the condition of the ovaries.

I here show you the temperature-chart of this woman. The evening after the operation, the temperature was 98°; the next morning, 100.6°. It then continued normal until the abscess developed, when it ran up to 100°. The disturbance has not been as great as would ordinarily follow the amputation of the little finger. She was kept twenty-four hours without anything to eat. Sometimes I give nothing for thirty-six hours, except a little cracked

ice, and, if necessary, an occasional teaspoonful of good brandy or whiskey. She then received a tablespoonful of milk every two hours. The next day the quantity was increased to two tablespoonfuls, and the next day to three tablespoonfuls every two hours, the quantity being gradually increased. She has now an excellent appetite. The loss of flesh is due to the abstraction from the blood of the rich constituents of the fluid. I have known an ovarian cyst after being tapped to fill up at the rate of a pound a day, which meant the loss of nearly one pound of blood each day.

She is now taking strychnia, in the form which we term the "lemonade iron." It is prepared as follows:

R Strychninæ sulph., gr. $\frac{3}{4}$;
Tinct. ferri chloridi, ʒiv ;
Acidi phosphorici dil., ʒvi ;
Syrupi limonis, vel simp., q. s. ut ft.
 ʒvi . M.

Sig.—A dessert-spoonful after each meal.

This preparation of iron is very good for children. I give one minim for each year of age. Iron in a fluid form is, I think, more readily assimilated than when given in pills. The objection to the tincture is that it injures the teeth. The precaution should be taken to have the medicine well diluted and taken through a glass tube and the teeth well brushed with soda and water.

CRIMINAL ABORTION.

Before bringing in the next case, I want to tell you something that happened to me lately. I have often told you to be cautious in passing the sound, so as not to produce abortion. You will often be urged by unmarried and married women to bring on a miscarriage for them. I urge you not to accede to their wishes. I do this for two reasons: first, because it is a criminal act and a great sin before God and man; and, second, because you are liable to get into trouble. Years ago, I have had persons approach me in this way, but I thought the time for that had gone by. Night before last, a young woman came into my office and said she wished to see me. I told her that if she wanted an examination I could not make it then, but that she would have to come in the morning. She returned yesterday morning and told me that she had gone two months without seeing her monthlies, that she knew she was pregnant, and that she wanted

me there and then to bring on an abortion. I was very angry, and asked her who had sent her to me. She had heard that I treated female complaints, and thought that I would help her. I explained to her that it was a great sin. She admitted that, but said that she was going to have it done. So I bade her "good-morning."

PROLAPSE OF THE UTERUS WITH PROLAPSE OF ONE OVARY.

This is a patient that I have not seen before. She states that she is 28 years old, has been married nine years, and has had four children, the youngest of whom is two years old. She complains of severe bearing-down pain; she at times becomes very melancholy, has pains in the left side, and lifting tends to bring on the monthlies. I have an idea as to the nature of the trouble. I have seen analogous cases, and have frequently found two conditions,—retroversion of the uterus, and prolapse of the ovaries. In one case I slipped the ovary up and introduced a pessary, and the patient immediately improved and became brighter. In a short time the ovary fell down again, and she came back with a suicidal tendency. After the ovary was pushed up, she again got better, but now she is much worse; and it is a question whether or not it would not be best to remove the ovaries.

This patient says that she passes a great deal of water, and that it is of the color of spring-water. This would seem to indicate a nervous element. Examining per vaginam, I find a tear of the cervix and some enlargement of the glands of Naboth. There is no retroversion, the womb being in a good position of anteflexion. There is, however, prolapse of the anteflexed womb. The left ovary is prolapsed, but I cannot feel the right ovary. If I were to press on it and squeeze it, as I might a cherry-stone, between my fingers, it would slip away, and she would jump as though I had stabbed her with a knife. I was partly right and partly wrong in my supposition.

She has no retroversion, but the womb is prolapsed and presses upon the nerves. She also has prolapse of the ovary. The sound gives a measurement of three and a quarter inches. If the laceration were closed, the measurement would be at least three and a half inches. There is subinvolution, and I have no doubt that there are within the cavity fungous vegetations. She has a dislocated ovary, which is

larger than it should be. The congestion of the ovary has acted secondarily on the womb. As I have often said to you, the word "woman," or *womb-man*, is a misnomer. She is a woman because she has ovaries,—not because she has a womb. A woman who is born without ovaries remains a child and undergoes no development, while, on the other hand, many a woman is born without a womb and yet has all the development and attributes of womanhood. The scientific label of woman should be "ovary-man."

The congestion of the ovaries causes an interference with the circulation of other parts; the womb is enlarged and prolapsed, and presses upon the ovary, giving pain. If the ovary were a little lower than it is, there would be another symptom; *i.e.*, when the fæces were at all hard and there was straining when the bowels were moved, there would be pain radiating down the leg. She does not have much pain at this time, but feels a chill from her head to her feet. In reply to a question, she tells me that there is pain in the marital relation. The pain would be worse if the ovary were in the median line in Douglas's pouch, but it is in the lateral pouch, and is not so much impinged upon.

What shall we do for her? The proper plan is to give some remedy which will lessen the flow of blood to the ovaries. I shall give her ammonium chloride in combination with ammonium bromide, as follows:

R Ammonii chloridi, ℥iv;

Ammonii bromidi, ℥iv;

Infus. gentianæ comp., ℥vi. M.

Sig.—A dessert-spoonful before each meal.

If it prove too irritating for the stomach, it may be given after meals, in water. She will also take ten drops of tincture of digitalis, three times a day. This, besides being a heart-tonic, lessens the amount of blood going to these organs. At the end of a week we shall be able to give the iron preparation before mentioned. She is not now in a condition to take iron. It is best to prepare her for the iron by the use of a purge and the administration of such remedies as the chloride of ammonium. With the iron she will receive strychnia. Sometimes iron cannot be given because it increases the flux of blood. She will also need a properly-fitting pessary. I think that, if the melancholy is not due to incipient insanity, she will be greatly improved.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

THE CHEMISTRY OF URINE.

PARAXANTHINE.—By operating on large quantities of urine, G. Salomon has succeeded in extracting a new matter which he calls *paraxanthine*. The urine was collected in vessels containing a small quantity of nitric acid to prevent ammoniacal fermentation, and, in quantities of twenty-five to fifty litres, was rendered alkaline with ammonia. 0.5 or 0.6 gramme of silver nitrate per litre was added, and the dirty-white precipitate collected and washed as long as the washings contained chlorides; it was then suspended in water and decomposed by hydrogen sulphide, and the filtered liquid evaporated until an abundant deposit of uric acid was formed. The remainder of the latter acid was precipitated by an excess of ammonia, and the new filtrate obtained, after standing two days, again precipitated by silver nitrate. The compound of silver nitrate and hypoxanthine was thus separated, while xanthine and the new substance remained in the mother-liquor, from which they were precipitated by the addition of ammonia. This last precipitate was decomposed by hydrogen sulphide, and the clear liquid treated with ammonia, evaporated to small bulk, and again filtered. On crystallization, xanthine separates first, and from the strongly concentrated mother-liquor the paraxanthine is deposited in large colorless hexagonal tables. It is slightly soluble in cold water, much more soluble in hot water, and insoluble in alcohol and ether; the solution is neutral. No hydrochloride could be obtained, but the substance combines with the alkaline hydrates, forming microscopic crystals, which are precipitated when potassium or sodium hydrate is added to a concentrated solution of paraxanthine. Successive treatment with nitric acid and caustic soda produces a pale-yellow color. Weidel's test (evaporation with chlorine water and a trace of nitric acid, and contact of the residue with ammonia vapor) develops a rose color. From twelve hundred litres of urine only 1.2 gramme of paraxanthine was obtained, and new experiments must show whether this substance, to which the formula $C_{15}H_{17}N_9O_4$ is

assigned, pre-exists in the urine or is formed during the manipulations.

UROSEÏNE.—This substance is the cause of the rose color assumed by many specimens of urine several minutes after the addition of strong hydrochloric or dilute sulphuric acid. Nencki and Sieber have never found it in normal urine, but in about ten per cent. of pathological specimens; these represented the most varied affections,—diabetes, chlorosis, nephritis, typhoid fever, carcinoma of the œsophagus, etc. The diet appears to have no influence on the appearance of this substance in the urine: in the same case it may disappear for a few days and its elimination be resumed as before. Its detection is not difficult. To fifty or one hundred cubic centimetres of urine, five or ten cubic centimetres of sulphuric acid diluted with three times its weight of water are added, and then a few cubic centimetres of amyl alcohol. The tube is agitated, with precautions that the mixture may not form an emulsion, and the alcohol, dissolving the uroseïne, separates with a bright rose color. The solution causes a spectroscopic absorption-band between D and E, and concentrated solutions allow the passage of only red and orange rays. Ether, chloroform, benzol, and carbon disulphide do not remove uroseïne from the urine. Ammonia and solutions of the alkaline hydrates and carbonates decolorize the solution of this coloring-matter, but the color reappears on the addition of an acid. Powdered zinc agitated with the acid solution bleaches the color in the same manner, but it is restored on exposure to the air. Uroseïne is unstable, resembling in this property the red coloring-matter of the retina: urine which has assumed a rose color by the addition of an acid is spontaneously decolorized after standing a few hours; after evaporation of the alcoholic or aqueous solution only a resinous brown matter remains. However, by the following process a solution is obtained which may be kept for several weeks: a few litres of the urine are rapidly concentrated to half the volume in flat dishes on a water-bath; after cooling to 30° C., hydrochloric acid is added, and the color is fixed on clean wool, sodium acetate being added if necessary. The wool is then carefully washed in water, dried in the air, and digested on a water-bath with absolute alcohol containing a little sulphuric acid.

The alcoholic solution so obtained is the purest and most stable which the authors could prepare.

LACTIC ACID.—Nencki and Sieber have found that even large doses of lactic acid—twenty grammes of sodium lactate per twenty-four hours—are completely oxidized in the human body in glycosuric conditions as well as in health. This observation is entirely contradictory to the statement of a large number of experimenters that normal human urine contains lactic acid. The authors have consequently made a critical examination of all the publications on the subject, and conclude that, except in two cases, one of which was acute phosphorus-poisoning and the other trichinosis, in which the lactic acid was isolated from the urine and its zinc salt analyzed, none of the analyses warrant the conclusion that lactic acid exists in human urine. To a case of diabetes, in which from 400 to 600 grammes of glucose were eliminated in twenty-four hours, and in which it might consequently be supposed that the oxidizing powers of the system were very low and that no foreign matter would be burned, twenty grammes of neutral sodium citrate and sodium lactate were administered per day, and the urine contained neither citric nor lactic acid. On the contrary, injections of benzol were followed by the appearance of notable quantities of phenol in the urine. In a case of leucocythæmia, in which the daily excretion of uric acid was increased to one gramme, not only could no lactic acid be detected in the urine, but the patient was still able to oxidize twenty grammes of sodium lactate per day. These results are important in relation to the pathology of diabetes and other affections in which we would be tempted to conclude that no such oxidations could occur.

ACETYL-ACETIC ACID.—The violet or red color produced by the addition of ferric chloride to urine is attributed by Tollens to the presence of acetyl-acetic acid, and Rudolf von Jaksch has confirmed the opinion. By agitating with ether urine acidulated with sulphuric acid, shaking the decanted ether with water and cupric hydrate, rapid evaporation of the solution in a vacuum, and extraction of the residue with absolute alcohol, Jaksch obtained a copper compound the analysis of which gave the figures required by the compound of acetyl-acetic acid. The

salts of zinc, barium, and ammonium were prepared from urine in the same manner, and the results fully sustained the indications furnished by the copper compound. These salts decompose rapidly in solution, as does also the free acid, which disappears from fresh urine after standing twenty-four hours, and more quickly if the urine be warmed.

DETECTION OF GLUCOSE.—Gautrelet remarks that we may readily distinguish between a reduction of the cupro-potassic solutions by glucose and a similar reduction by uric acid. The reduction by glucose takes place as soon as the liquid begins to boil, and is not increased during cooling. If, however, a reduction begins when the tube is withdrawn from the flame, and continues during cooling, it is to be attributed to uric acid.

DETECTION OF ALBUMEN.—Arthur R. Haslam finds that a very dilute solution of albumen, to which a little common salt is added, is precipitated by ferric chloride, and proposes the use of the latter for the detection of albumen in urine. The test is worthy of no confidence, for the author himself directs that acetic acid should first be added to the urine in order to prevent the precipitation of the ferric chloride by the phosphates. The precipitation of albumen by ferric chloride and by ferric acetate is a long-known fact, but the precipitate is soluble in an excess of the reagent.

ESTIMATION OF UREA.—L. Hugounenq estimates urea by heating five cubic centimetres of urine, previously filtered through animal charcoal, with fifteen to twenty cubic centimetres of water to 190° C. in a sealed tube. The quantity of ammonia formed is then determined by the aid of a normal sulphuric acid containing forty-nine grammes of sulphuric acid per litre. The required number of cubic centimetres multiplied by six gives, in grammes, the quantity of urea in a litre of urine. This method is not applicable to urine containing sugar; that containing albumen must first be boiled. The process is quite as troublesome as that of Bunsen, over which it possesses no advantage.

BILE-PIGMENTS AND ACIDS.

E. Drechsel proposes the substitution of phosphoric acid for sulphuric acid in Pettenkofer's reaction. The solid substance to be tested, together with a grain of

sugar, is dissolved in one to three drops of a mixture of five volumes of syrupy commercial phosphoric acid and one volume of water. The test-tube is warmed by immersion in boiling water.

According to St. Capranica, solutions of bilirubin and biliverdin in alcohol, ether, or chloroform assume, after the successive addition of bromine, water, chloric acid, and iodic acid, a green color which deepens to blue and violet, then changes to orange, and finally disappears. The conversion of bilirubin into biliverdin is effected in neutral solutions by the action of light, and the former compound may so be distinguished from the hematoidin of the corpora lutea, whose solution is decolorized by exposure to light and does not become green. Whether the hematoidin of old apoplexies is identical with that of the corpora lutea is still doubtful. St. Capranica considers it improbable that the bile-pigments are derived from the coloring-matter of the blood, notwithstanding that they are related by many properties, as by their reduction, which in each case yields hydrobilirubin. Solutions of the latter do not become red on addition of bromine-water, but are colored violet-red by the chloric and iodic acid. A sharper test consists in agitating an ethereal solution of hydrobilirubin with aqueous iodic acid, which so acquires a violet-red color.

TIME REQUIRED FOR STOMACHIC DIGESTION.

E. Jessen has made some experiments on the time required for the digestion in the stomach of several articles of diet. The stomachs of the persons submitting to the experiment were emptied by the aid of a pump, and one hundred grammes of raw or cooked meat mixed with three hundred cubic centimetres of water were introduced. The experiment was considered ended when the stomach-pump could remove no particles which exhibited the microscopic appearances of muscular fibre. The results were as follows:

Raw and finely-cut beef,	2	hours.
Partially-boiled "	2½	"
Well-boiled "	3	"
Rare roast "	3	"
Well-roasted "	4	"
Raw mutton,	2	"
Raw veal,	2½	"
Raw pork,	3	"

The digestion of milk was examined in the same manner, a quantity of milk being used of which the percentage of nitrogen was equivalent to that of one hundred grammes of beef.

602	cubic centimetres	raw	cow's milk,	3½	hours.
602	"	boiled	"	4	"
602	"	sour	"	3	"
675	"	skimmed	"	3½	"
656	"	raw goat's milk,		3½	"

A SUGAR-LIKE BODY EXTRACTED FROM THE LUNGS AND SALIVA OF PHTHISICAL SUBJECTS.

A. G. Pouchet has by a somewhat complicated process extracted from the saliva and lung-tissue of consumptives a carbohydrate having the composition $C_{12}H_{20}O_{10}$. It is an amorphous white powder, the aqueous solution of which rapidly becomes brown and mouldy. It does not reduce Fehling's solution, but acquires reducing properties by boiling with acids. It is feebly dextrogyrate. It produces a cloudiness with silver-nitrate solution, and soon afterwards a separation of metallic silver. It is distinguished from glycogen by its reactions and by its perfect solubility in water.

BORIC ACID AS A FOOD-PRESERVATIVE.

J. Forster has made some experiments on the influence of boric acid on digestion. Starting with the assumption that the most perfect digestion is that which furnishes the least quantity of solid excrements, he weighed the dried excrements, estimating also the nitrogen, of an individual who was kept on a constant diet of eggs and milk. During certain periods of two or three days this food was administered pure, and during similar periods with the addition of from 0.5 to three grammes of boric acid. The results indicated that the boric acid increased the quantity of dry excrements and nitrogen. Some experiments seemed to show that the proportion of albuminoid matters contained in the excrements was also augmented by the ingestion of boric acid. The author remarks that, should these results be confirmed by more extended experiments, boric acid must no longer be highly esteemed as a food-preserver, and that particularly must attention be given to the fact that this substance is frequently added to milk intended for the use of infants and invalids.

FIBRIN AND FIBRINOGEN.

Denis distinguishes three modifications of human fibrin: 1st, *concrete modified*

fibrin, obtained by whipping arterial blood or by diluting with water venous blood received in a solution of sodium sulphate; this is insoluble in solutions of common salt, and identical with ordinary fibrin; 2d, *concrete fibrin-globulin*, from venous blood coagulated by rest; this is swollen and gelatinized by ten-per-cent. salt solution; 3d, *concrete pure fibrin*, formed by beating venous blood, perfectly soluble in salt solutions. The difference between these varieties, which has been denied by Eichwald, is in the main sustained by Hammarsten, who considers the first-named insoluble variety as the type. The gelatinization, or the second variety, may be produced from fibrin by the addition of a large proportion of white blood-corpuscles. The third and soluble variety, which Denis obtained from human blood by adopting special precautions, Hammarsten has prepared from the fibrinogen of horses' blood by taking advantage of a characteristic but not entirely typical property of that substance, by the addition of a large quantity of paraglobulin or an insignificant amount of free alkali; carbonic acid retards the change, but does not exert any modifying influence on the resulting fibrin. The later researches of Hammarsten indicate that, besides the necessary salts pointed out by Schmidt, only two bodies are required for the production of fibrin: they are fibrinogen and the fibrin ferment; paraglobulin may increase the production, because it opposes certain of the influences preventing coagulation of the natural fibrinogen solution. Hammarsten's estimations of the fibrin yielded by solutions containing no paraglobulin agree perfectly with those of Schmidt and Frédéricq; the fibrinogen always yielding less fibrin than would be required by its weight,—from 61.63 to 94.1 per cent. Fibrinogen coagulating at 56° C. disappears rapidly from its solutions, which then contain a new globulin, precipitated by magnesium sulphate and more readily by sodium chloride than is paraglobulin; this globulin coagulates at 64° C., and exists also in the serum of blood. By warming a fibrinogen solution to 50°–60°, an insoluble substance coagulates, and the liquid then contains the globulin coagulable at 64°. The insoluble substance contains more nitrogen than does fibrinogen; the soluble substance consequently containing less. Hammarsten does not

consider these products to be formed by decomposition, which would otherwise yield them in constant proportions. Agreeing with Denis, he believes that there is a soluble intermediate fibrin formed during the coagulation, and that this is at least partly, and perhaps by oxidation, converted into globulin.

SUCCESSFUL OPERATION FOR VESICO-VAGINAL FISTULA.

BY HILLARY RYAN, M.D.,

Caldwell, Texas.

OF all the ills that flesh is heir to, I know of none in which there is no danger to life, and but little to the general health, that entails on the poor sufferer so much discomfort and mortification as vesico-vaginal fistula.

The physical discomfort is great, but the mental suffering is greater. The constant dribbling of urine keeping the parts wet and excoriated, with the offensive smell, produces a condition which alone is sufficiently painful to elicit the sympathies of all connected with the unfortunate sufferer. But when we remember that the organs that a modest woman desires to be kept from the thoughts and attentions of those with whom she is surrounded are constantly kept vividly in her own mind, and, as she necessarily supposes, in the minds of those with whom she is associated, her chagrin excites our warmest sympathies. After reading the history of the many efforts to cure this distressing affliction, we feel surprised that more had not been done centuries ago than was done; and we are further surprised that better success did not crown the efforts at first of those eminent surgeons that did attempt the relief of this unhappy condition. Dr. J. Marion Sims says that he operated on three cases about forty times without making a perfect cure. The operation in the hands of Dupuytren, Jobert, and Velpeau was not encouraging.

Yet, with all those failures, the operation can now be performed on healthy subjects with perfect success, by following out the principles so clearly laid down by the well-known writers on the subject. Concerning the *technique* of the operation, we notice that Gosset* recommended

gilt silver-wire sutures. Hayward† advised the very free vivifying of the edges of the fistula. Mettauer‡ recommended lead wire because it could be tightened.

Dr. J. Marion Sims, in an elaborate article published early in 1852,§ advised that the sutures shall not enter the bladder, but pass through the edges of the fistula before entering the mucous membrane of the bladder.

These principles are all collected in an excellent article|| by Dr. Walter F. Atlee, who, with them, gives the additional advice to pass the sutures out some lines from the mucous membrane of the bladder, so as to make a ridge in the bladder when the fistula is brought together, instead of a sulcus.

In Dr. Atlee's operation a broad raw surface is made in the vagina, fully one-third of an inch from the edge of the fistula, and the sutures being passed in this way, at some distance from the mucous membrane of the bladder, the orifice is closed by twisting the wires together, as usual.

Dr. Atlee justly claims for his operation that there is a contact of surfaces instead of edges, and that a crest projects into the bladder instead of the depression into which the urine settles and finds its way into the sutures. The method by which this has been accomplished is readily understood.

Dr. Myers, of Lyons Station, sent to me for operation Caroline Jackson (colored). She was 33 years old, of medium size, stout, and had given birth to six children,—the last one in November, 1881. This had been a tedious labor, and had resulted in vesico-vaginal fistula. On examination, on the 5th of May, I found the fistula about half an inch in front of the mouth of the womb. It was large enough to admit my index and middle fingers. The right proximal edge was somewhat bound down to the os pubis, so that the distal and proximal edges would not meet well in apposition.

Before preparing her, or rather to prepare her, for the operation, I introduced into the urethra sponge tents, so as to dilate the urethra and raise the vagina as much as possible from its attachments. I passed them directly into the bladder. When

† American Journal of the Medical Sciences, August, 1838.

‡ Ibidem, July, 1847.

§ Ibidem, January, 1852.

|| Ibidem, January, 1882.

* Lancet for November, 1834.

they enlarged, I tore off the end in the bladder through the fistula, and withdrew it, as it made her quite sore. I waited a few days before introducing a larger one. By this means I lengthened the proximal edge so that it would meet the distal pretty well.

Having prepared her in the usual way by purgatives, on the 28th of May, assisted by Drs. Darr, Womach, Matthews, Cearnals, and Armstrong, I proceeded to operate as advised by Dr. Walter F. Atlee in the article referred to, except that I had her nearly on her elbows and knees.

We placed her on a table before a south-west window at two o'clock P.M., her body raised by bedquilts rolled up and placed under her abdomen so as to raise her hips until her knees would rest on the table. While in this position, with her shoulders a little raised from the table, her right hip a little more elevated than her left, the perineum well held back by a Nott's speculum used as a Sims's, and the vulva held apart by two spatulas, the patient being fully under the influence of chloroform, I vivified the vagina and the edges of the fistula with a Bozeman's knife, with the aid of the bistouries and scalpels such as are usually found in a pocket-case, for fully half an inch all around the fistula, going down on the edges to the mucous membrane of the bladder. This stage of the operation was tedious and troublesome.

There was but little hemorrhage, and that was easily controlled by ice placed on the parts.

After the arrest of the hemorrhage we commenced at the right side, where we found the worst adhesions and the most difficulty in making the ligatures meet and pass. We used a short, curved needle, armed with a silk thread tied at the end, in which was looped a silver wire. The needle was passed into the vagina one-third of an inch from the edge of the vivified surface, brought out in the middle of the raw surface, passed into the distal side opposite the place it was brought out of the proximal edge, and carried out one-third inch from the vivified edge on the distal side, just in front of the mouth of the womb. The silk was then drawn through, drawing the silver wire with it, until the wire, which was eighteen inches long, was half through. The ends were now fastened together and another stitch

made in the same way, until we completed the twelve which it took to reach the left side. We then again commenced, but on the right side, and with a fenestrated ball-forceps passing the wire through the fenestræ until the points of the forceps were within half an inch of the vagina, when I twisted the wires until I brought the parts together. I continued in like manner with all until the parts were well drawn together; but, upon close examination, I found that I had not commenced close enough to the edge, and so I put in another stitch at the right side. I then fastened the wires together with a piece of dressed buckskin. Having replaced her on her back, I introduced a silver catheter into the bladder, and with a Davidson's syringe washed out the bladder with warm water, and then the vagina. I then placed cotton-wool, saturated with laudanum, in the vagina over the fistula. Then, the operation being completed, I introduced a gum catheter into the bladder and placed her on a mattress.

28th. Morning. Temperature 101° , and badly nauseated. I thought the nausea was possibly from the chloroform and a dose of morphine given her. I gave her ice *ad libitum*, washed out the bladder and vagina, and replaced the cotton and laudanum. Iced milk-whey for diet.

29th. Evening. Washed out the bladder and vagina with warm water, and replaced the cotton and laudanum.

30th. Temperature 100° . No nausea. I washed out the bladder and vagina, and renewed the cotton and laudanum.

31st. Temperature normal. No pain in any part. Washed out the bladder with warm water; renewed the cotton and laudanum; changed catheter. At every dressing the catheter was cleansed, but we found it necessary to replace with a new one every day or two.

On the 1st, 2d, 3d, 4th, and 5th of June the treatment was the same, except her diet, which was of wheaten bread, tea, and milk. No other diet allowed; but she was allowed tea or milk as she chose.

6th June. When we used the warm injection in the bladder, blood issued from the vagina. We were greatly troubled, fearing that the operation was not a success; but when the woman who nursed her came, she suggested that it was her "sickness" on her. We examined the parts as best we could, and could see noth-

ing to indicate ulceration or that the stitches had given way. We still used the same washings and opiate applications. Her menses lasted until the 10th, then ceased. On the 11th I ordered an enema to move the bowels, and it acted well.

15th June. I was summoned to Lampasas on professional business. Before leaving, I cut off the wires at the vulva, which she thought I "ought to have done at first," and let her walk around as she pleased. I was detained at Lampasas three weeks. On returning I found our patient well.

At this visit I found five of the sutures on the left had grown out. I cut off the distal end of the others and carefully drew them out also. In two weeks more, one could not have told where the fistula had been. I think it wholly unnecessary to leave the sutures in so long, but in this instance I feared sexual intercourse, which the wires prevented.

I think that this case demonstrates the truth of the assertion of Dr. Atlee that, if broad, raw surfaces are fastened together by sutures, not entering the bladder at all, the sutures, of silver or gilt silver, being introduced so as to make a crest in the bladder instead of a depression, and a contact of surfaces in place of edges, the operation will be a success no matter what kind of instruments you use. For in this instance, with the exception of a Nott's speculum used as a Sims's and a Bozeman knife, I had nothing but what was improvised for the occasion. I may have been extravagant with wire,—for I used up about twenty feet,—but the subsequent progress showed that no case could have done better.

AN EXAMINATION OF THE FÆCES OF TWENTY PERSONS RECEIVING INUNCTIONS OF COD-LIVER OIL.

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AND

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IN a study of the fæces of starch-fed infants* one of us observed a specimen in which there was present a very notable

amount of oil-globules. Upon inquiry, it was found that the child in question had been receiving inunctions of cod-liver oil.

The same coincidence was a second time noted, and the following series of experiments was then instituted.

The fæces of fourteen infants, in fairly average health, were examined with negative results as far as oil was concerned, except in one case.

These infants were then thoroughly rubbed with cod-liver oil twice daily for eleven days, care being taken to cleanse the surface of the body after each inunction, and the fæces of each examined for oil at the end of the third and of the eleventh day of inunction. At the end of the third day, traces of fat were observed in the majority of the specimens. On the eleventh day all but three specimens exhibited, on microscopical examination, a decidedly notable quantity of unabsorbed fat,—numerous oil-globules being apparent in every field.

In like manner an examination was made of the dejecta of six adults, after which each was twice daily well rubbed with cod-liver oil in the groins and axillæ for a period of three weeks. The fæces of the adults contained normally much more fat than those of the infants, but in all but one case there was a well-marked increase in the proportion of fatty globules at the end of the treatment.

The circumstances of the examination precluded the application of the ether method for the estimation of fats, and we were forced to rely upon a close microscopical examination. For the micrometric method only relative accuracy is claimed, and we hope soon to be able to go over the same ground, substituting a chemical for the optical method in the determination of fats. By the use, however, of well-mixed specimens, and by carefully averaging the contents of many fields from the same specimen, we have obtained results which we believe accurately represent the changes in the *relative* proportion of fat in the specimens examined, although the unit assumed may not correspond with that obtained by gravimetric methods.

The individuals under observation were upon a diet practically uniform in composition and quantity, both before and during the treatment. At the end of the period of inunction a marked gain in

* Randolph: Transactions of the College of Physicians of Philadelphia, 3d series, vol. vi. p. 443.

weight and general health was noted in the majority of the cases.

The results of our study are indicated in the following table :

cases, and that by the application of this test both the frequency of exhibition and the amount of a remedy rather repugnant to the average patient may be reduced to

No.	Age.	Diet.	Fat in Fæces before Inunction.	After Three Days' Inunction.	After Eleven Days' Inunction.
1.....	2 months	Milk and crackers	Negative	Negative	Negative
2.....	3 "	" "	" "	" "	3 per cent.
3.....	4 "	" "	" "	Traces	3.5 "
4.....	5 "	Corn-starch and milk	" "	" "	5 "
5.....	5 "	Milk and crackers	" "	" "	3 "
6.....	5 "	" "	" "	Negative	Negative
7.....	6 "	" "	Traces	Traces	Traces
8.....	6 "	" "	Negative	Negative	3.5 per cent.
9.....	8 "	" "	" "	" "	5 "
10.....	11 "	" "	" "	Traces	3.5 "
11.....	12 "	" "	" "	" "	3 "
12.....	14 "	" "	" "	" "	3.5 "
13.....	14 "	" "	" "	" "	2.5 "
14.....	15 "	Corn-starch and milk	" "	" "	3.5 "

No.	Age.	Diet.	Fat in Fæces before Inunction.	Fat in Fæces after 21 Days' Inunction.
1	Adult.	Hospital Diet	Traces	Traces
2	"	" "	2 per cent.	5+ per cent.
3	"	" "	2 "	10+ "
4	"	" "	3 "	10 "
5	"	" "	Negative	Traces
6	"	" "	"	"

It will be seen, from the table given above, that in eighty per cent. of the cases a notable increase of the fatty matters passed per anum was observed after the persistent inunction of cod-liver oil. In the remaining twenty per cent. the quantity of fæcal fats was unaltered by the treatment, and in one case remained negative throughout.

We venture to suggest, as a provisional hypothesis, that by the continued inunction the circulating fluids became to some extent surcharged with fats, and that, in consequence, a certain amount of the fatty constituents of the food was refused by the absorbent surfaces of the intestine and passed from the body unaltered. This supposition is strengthened by the observations of Berthe,* who showed that pure cod-liver oil, given internally, could be taken for a longer time without appearing in the fæces, than could an equal amount of butter or any of the other animal and vegetable fats.

We further suggest that, in practice, the increase of fat in the stools constitutes a physiological test for the efficiency of the aliptic treatment in the great majority of

the minimum necessary for efficient treatment.

BIOLOGICAL LABORATORY OF THE
UNIVERSITY OF PENNSYLVANIA,
November 10, 1883.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF DR. R. J. LEVIS, ONE OF THE ATTENDING SURGEONS TO THE HOSPITAL.

Reported by GEORGE F. SOUWERS, M.D.

REMARKS ON FRACTURES.

GENTLEMEN,—During the course of the college term I endeavor in this hospital to demonstrate as far as possible all the different forms of fracture. Nearly all the common forms of this surgical injury, and many uncommon ones, are thus brought to your notice in the lecture-room of this institution.

CASE OF FRACTURE OF THE FIBULA.

In pursuance of this plan, I bring before you this morning the individual to whose case I now call your attention. Before examining him, I shall premise that he met with his misfortune through being thrown off a street-car, striking upon the ground with his foot turned laterally, the result being, as I shall demonstrate to you, a form of fracture which is nearly always produced by falls or twists with the foot turned in this particular manner. The fracture referred to is that of the fibula, the seat of injury usually being about one and a half or two inches from the lower end of the bone, or the outer malleolus alone may be chipped

* L'Union Médicale, t. x. No. 62, 1856.

off; but we find the most common seat to be, as I have said, about an inch and a half to two inches above the lower extremity, at the point where the bone is thinnest. The fracture of this bone may be very simple in character, or it may be complicated by reason of a dislocation also of the astragalus, constituting the celebrated "Pott's fracture."

It is, when simple and uncomplicated, a fracture that is very likely to deceive one. Not unfrequently has this fracture been mistaken for a simple sprain of the ankle, for while at times there may be great deformity of the leg in the victim of this accident, yet we cannot say that there is always deformity. The most marked evidences of the fracture are the great lateral mobility of the foot, and the outward displacement of the ankle and foot. Knowing now what I have just told you, you must remember to watch cases of this kind narrowly and examine them critically. There are two methods by which you may arrive at a diagnosis. One is to grasp the foot and move it outwardly and then inwardly towards its normal position; this process will, of course, elicit crepitation, and this, together with the pain produced as you force the foot out, and its extreme range of lateral motion, will indicate with what you have to deal.

The method of procedure just spoken of answers very admirably where the patient is not fleshy, and where the fracture is decidedly marked by greater or less deformity, and possessing all or most of these features characteristic of the fracture, and which will distinguish it from simple sprain.

If now, however, you come in contact with a case of this fracture where there is but little displacement, or where the patient is very stout, fat, or muscular, you will not unfrequently find great trouble in arriving at a satisfactory conclusion as to the injury present. There is one method under such circumstances which I have tried and found to answer most admirably, and that is this: feel for the head of the fibula just near its junction with the tibia, in the neighborhood of the annular ligament; at this point make decided pressure so as to produce a tilting motion at the distal end of the bone; if fracture is present, pain will be felt, not at the spot at which pressure was made, but at the point of fracture; if you thus elicit pain you can rest assured of the diagnosis, and can direct your treatment accordingly. I may

say here that this fracture is peculiarly the fracture of the leg consequent upon falls from a height, especially where the man strikes with the foot slightly everted. Fractures from a misstep, as where one falls in walking from the pavement to the gutter with the foot everted, nearly all take place here. Further, where there is lack of co-ordination in walking, as in drunken men, fracture of the leg, if it takes place, seems to select the lower end of the fibula as its favorite seat: indeed, so commonly do we admit drunken men to this hospital suffering under this lesion that I call it the "drunken man's fracture." As to treatment, do not imagine, as many seem to do, that because you apply a certain form of splint or bandage, the reduction of the fracture is thereby accomplished and the cure fairly inaugurated. Let splints for this or any form of fracture be your last thought: you can arrange splints according as circumstances and cases arise: your judgment must dictate to you what kind to employ, and not any set rule or form. Let, then, your first and primary object be the proper reduction and coaptation of the fragments. The medical mind seems to be so associated with splints for fractures that not enough care is bestowed on this item of proper reduction. A pillow for the leg and foot to rest upon, and to make equable pressure in order to retain the parts properly *in situ*, together with a fracture-box, will answer all purposes in ordinary, simple cases, and complicated cases, of course, must be, as I have said, treated on their merits.

FRACTURE OF THE STERNUM.

In this, our next case, we have an extraordinary case of fracture. While in private practice it is rare to see the form of injury we are about to examine, yet in this institution we see it with a fair degree of frequency,—that is, considering its acceded rareness. For instance, in the past two months two cases of the kind have been admitted to the wards, one of them being the case before you. This man, while at work, had a wall fall upon him, the result being a fracture of the sternum, or what generally is classed under that head. As a rule, the so-called fracture of the sternum consists of a dislocation of the manubrium, or upper segment of the bone, and this, I think, is what took place in this case. Of course we may have true frac-

ture and even comminution of the sternum, but this is generally the result of great, direct violence, as from the passage of a heavy weight across the chest, or a crushing force squeezing the chest, as in bumper and other railway injuries. The most common cause of the accident, as we here see it, is from violence that bends the body over very strongly, a force that carries the shoulders and chest into undue flexion. For instance, a not uncommon manner of this accident's occurrence is where a man working at the bottom of a well has a bucket of earth or a large stone precipitated on him from above; in stooping to protect his head the shoulders receive the impact of the blow, and this is expended ultimately on the sternum. The chest at the point of fracture or dislocation, which is generally situated at or about the second intercostal cartilage or space, is driven in so as to leave a large depression, similar to the one in this man's case, which admits of the burial of his fist in the deformed chest-wall. Indirect violence, as by a fall on the shoulder, will also produce this accident, which, as I have said, is more of an epiphyseal separation than a true fracture. The contiguous ribs stand out prominently and boldly at the seat of injury. The best method of reduction is to pile pillows upon each other under the patient's back till a high fulcrum is formed, over which he is bent backwards by the shoulders; extreme retroflexion is made, until the peculiar snap of the fragments returning into place is heard. In those cases where the accident follows violent direct injury, death generally occurs, in consequence of rupture or injury of the heart, lungs, or great vessels, and nothing can be done for the relief of the victim, such cases not being amenable to treatment. Pressure at the seat of accident will generally elicit pain, as in all other forms of fracture. After reduction the patient should be kept in the recumbent posture and carefully watched for chest-symptoms.

FRACTURE OF THE FEMUR, WITH DELAYED UNION.

At the last clinic I showed you a case of delayed union in a case of fracture of the femur, the patient being a man who was somewhat advanced in life, and who had at various times in his career suffered other forms of fracture, in which delayed union was present. The case I now bring to your

notice shows the same condition, in the femur of a boy about 12 years of age. This boy has had also previous to this a fracture of the bones of the opposite leg below the knee; this, however, healed nicely and without complications. Now, ten weeks after receiving this fracture of the femur, we find a condition of pseudo-arthritis, or false joint, though there seems to be a good deal of callus thrown out around the point of fracture. In some this condition of delayed union seems to be traceable to some vice or debility of the system, as a syphilitic or cancerous cachexia. In others we may have various causes; a piece of tendon, muscle, or bone may by its position prevent proper coaptation and union of the fragments; or we may have a condition that obtains in some cases, —namely, instead of the inflammation following such an injury being an inflammation of repair, it seems to be an inflammation of rarefaction; callus is not deposited, but the ends of the bone become rounded off, attenuated, and flail-like in character. In private practice I have found that too tight bandaging, by interfering with the nutrition of the parts, is a most prolific cause of this disastrous termination of fractures. The best remedy in any case is to build up the system, get the patient out of bed and into the open air, allow him to walk about on the injured leg, having first enclosed it in a permanent dressing, and, by means of the attrition thus produced of the ends of the bone, strive to set up a reparative inflammation. The leg naturally hangs down, and in its normal position with this increased stimulus it may be that sufficient extra circulation may take place in the part to accomplish the desired end.

TRANSLATIONS.

TREATMENT OF WENS BY ETHER-INJECTIONS.—A communication to the *Bulletin Générale de Thérapeutique*, by Dr. Lemoyez, Interne at the Hôpital St.-Louis, Paris, discusses the different methods of treatment of sebaceous cysts of the face and scalp, and recommends parenchymatous injections of pure sulphuric ether. A case is reported of a man debilitated and affected with chronic alcohol-poisoning, therefore a bad subject for a surgical operation, who was relieved of a wen of five years' growth

by ten hypodermic injections of ether practised at intervals of a day or two. The result was the conversion of the tumor into a cyst with fluid contents, the evacuation of the same, and speedy destruction of the cyst-wall by inflammatory action. In the case quoted, the treatment resulted in a perfect cure in a month, without keeping the patient in bed or restricting his movements as would have been required by the ordinary operation.

The advantages claimed for this method are its simplicity, painlessness, and efficiency, without exposing the patient to the risk of a surgical operation or in any way interfering with his business. The injections are made into the interior of the cyst, five or ten drops at each sitting, the needle of the hypodermic syringe being moved about so as to break up the contents as much as possible. They are discontinued when inflammation or suppuration begins.

TREATMENT OF CHRONIC URETHRITIS AND CYSTITIS.—Dr. Guyon lays much stress upon the constitutional treatment with cod-liver oil, arsenic, iodide of iron, the sulphides externally and internally, balsams, douches, etc., according to the diathesis. The local treatment by injections, instillations, and catheterization is also of great value. Injections are only useful when judiciously employed; although most frequently used, they often fail on this account. They are either too strong or not strong enough; they either do injury or they are not efficient. Instillations made with an olive-pointed catheter in which an opening exists at the side of the olive are more valuable. A syringe is adjusted to the other extremity of the catheter, and the instrument is gradually introduced into the urethra until it meets a slight sense of resistance, when five or six drops of the solution are thrown in; after waiting a few minutes, the instrument is introduced farther, and, when it reaches the posterior extremity of the urethra, twenty to twenty-five drops are injected. The medicament usually employed by M. Guyon is the nitrate of silver ($\frac{1}{20}$ to $\frac{1}{50}$); he also uses the sulphate of copper ($\frac{1}{10}$ to $\frac{1}{30}$). Catheterism is not to be practised early, for fear of complications, orchitis, cystitis, etc., but in obstinate cases it may be cautiously used every second day; the metallic bougies are the best for the purpose. Medicated bougies seem to be without utility. Should

blennorrhagic cystitis with hemorrhages occur, it is best treated by instillations of nitrate of silver, which rapidly stop the bleeding. This treatment is also effective in chronic cystitis, which is particularly liable to be persistent and have relapses.—*Bulletin Général de Thérapeutique*, November, 1883.

SPONTANEOUS PYÆMIA.—A young man, 32 years of age, was suddenly taken, without appreciable cause, with muscular pains, and swelling of the sheaths of the tendons of the wrist and of the foot, which appeared rheumatic. Upon examination there was found very marked tenderness and swelling along the course of the tendons in the leg, in the forearm, and in the calf of the leg, present in all of the four extremities, but more marked, however, upon the arm and leg of one side. M. Guyot, who had the case under observation, pronounced it one of pyæmia, but was unable to detect any cause for it. There had not been any traumatism, no trace of any cachexia, no evidence of over-fatigue, no diabetes, no albuminuria, no marked alcoholism. The diagnosis of idiopathic pyæmia was then made. The patient died twenty-four hours later. [The record does not state that the possibility of the case being one of trichinosis had been considered, although some of the symptoms might suggest this explanation.—Tr.]—*Revue de Thérapeutique Méd.-Chir.*, No. 23.

CHARCOAL-AND-CAMPHOR DRESSING FOR WOUNDS.—Barbocci (in *Raccogliatore Medico*) recommends a mixture of equal parts of camphor and animal charcoal as a substitute for Lister dressings. The camphor acts physiologically in destroying microbes, the charcoal physically by absorbing and disinfecting the discharges. This is especially useful in old, excavated ulcers; the application removes fetidity and also relieves pain.—*Revue de Thérapeutique Méd.-Chir.*, December 1.

FOR THE TREATMENT OF PHAGEDÆNIC CHANCRES.—

R Acid. pyrogallic., 20 gm.;
Petrolati, 80 gm. M.

or

R Acid. pyrogallic., 40 gm.;
Petrolati, 120 gm.;
Amyli, 40 gm. M.

VIDAL.

In use at the Hôpital St. Louis.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 29, 1883.

EDITORIAL.

THE COMPLIMENTS OF THE SEASON.

AS this is the season of the year for compliments, greetings, and mutual wishes for success, we but follow a graceful custom in cordially tendering those of the *Philadelphia Medical Times* to its readers. In doing so we may be pardoned a few remarks upon the standard to be adopted in estimating the measure of professional success, and, perhaps, a suggestion as to its essential elements and conditions. In what follows we will express sentiments which are those of the better portion of the profession, and which we feel certain will meet the approval of our readers.

Action, said to be the secret of oratory, is certainly one of the necessities for success; what is called genius is often merely a talent for steady, persistent labor. But when men are actively striving for progress in the same direction, there is danger that some, in their eagerness for personal advancement, may disregard the rights of others. In a profession, which is distinguished from a business by an elevation of the claims of the mass above those of the individual in certain directions, this danger of encroachment can be avoided only by mutual agreement as to the principles which shall regulate conduct, and the recognition of this truth has led to the establishment of what have been called codes of ethics. Since the introduction of the Code of Ethics of the American Medical Association, it has been observed that the tone of professional intercourse in this country has manifestly improved,* and for this reason it is warmly

* See the address of Dr. John L. Atlee before the American Medical Association this year.

defended, and rightly so, by the great mass of the profession. The Code is now taken as the measure of a physician's duty to his colleagues, and his failure to obey it, in letter or in spirit, in his daily life, is regarded as failure in his highest obligations to his profession. For failure in this duty we feel that no other kind of success can atone, be it political, social, or financial. Too often a superficial estimate of success is made, based upon the apparent material prosperity of an individual; but a little reflection shows that the real standard of success is character, whether in private or in professional life. How often it is that a man's true nature is better known to his associates than he is himself aware! When a man actuated solely by selfish motives enters upon the practice of medicine, and, in pursuit of personal aggrandizement, profanes its solemn and responsible duties, he cannot long conceal this fact from those around him. The success of the charlatan certainly may be his, but never the love and esteem of his professional brethren; and the more self-asserting and the more conspicuous he is, the more obvious and melancholy is his failure. A true estimate of professional success is based upon services to humanity and to the profession. In the real physician, if his life-work be crowned by wealth and honors, they but lend a setting to the jewel; if these linger, success has not been missed. Of the late Dr. J. D. Trask, of Astoria, New York, who died a short time since, and whose death was called a public affliction, an entire community attending his funeral, it was said that "as an author, practitioner, citizen, and Christian he did his work effectively, quietly, conscientiously, and for the work's sake." The *Medical Record*, in whose columns this touching tribute appeared, adds, "It would be well if such could be said of all of us." This is the life and this the success that we cordially wish for all our readers. Its rewards may not be so alluring, but they

are more permanent and satisfying than those of the less honorable course indicated above, which is sometimes considered a successful life, though judged according to a mercenary and not a high professional standard. We owe it to the profession and ourselves to use our best efforts to elevate it, and, in order to do so, we should urge men of lower ambition to—

"Shun braggart glory, crave no sounding name;
Good deeds in heaven's scales weigh more than fame.
All pomp and vain display avoid, although
The foolish world is led by empty show.
Be always what you seem, seem what you be;
With learning couple large integrity.
Through merit seek to rise, and not by dint
Of blazoning your names in public print,
Or pseudo-scientific pamphlets, which
Not science, but their writers seek to enrich
Through wondrous tales of cures adroitly told,
To snare the credulous and filch their gold.
Praise not yourselves, nor others' praises buy;
As men, not showmen, with each other vie.
Upon the public never seek to palm,
With face unblushing and without a quail,
The coin of base, presumptuous pretence
For sterling gold of honest excellence."*

PULSATING EMPYEMA.

DR. COMBY, of Paris, has made pulsating pyothorax the subject of two interesting communications to the *Archives Générales de Médecine* for November and December, 1883, from which we glean the following points in regard to the symptomatology, causation, and treatment of this rare affection, which was first observed by Baillou in 1570.

In all of the twenty-seven cases analyzed by Dr. Comby, the effusion was seated in the left chest, and the symptoms were almost identical. After a certain period, a soft, pulsating, fluctuating, reducible, hemispherical swelling is observed, ordinarily on the lateral lower half of the thorax, although it may be seated in front, or on a level with the præcordial region, or behind and below, near the vertebral column. It may, moreover, occupy the loin, in which event it may be regarded as a perinephritic abscess with transmitted

aortic pulsation, as happened in a case recently in the wards of the Jefferson Medical College Hospital of this city. The pulsations are not expansile, nor are they, as a rule, forcible, nor are a thrill and bruit present, as happens in aneurism. The heart is invariably displaced to the right. The beats are not augmented in force, the rhythm is regular, there is no souffle, nor any other sign indicative of cardiac lesion. During all this time (and the affection pursues a very chronic course) the general health may remain good, or the patient may die before the pus is evacuated. Generally, however, the pus discharges itself spontaneously, the pulsations cease, and signs of pneumothorax set in, the heart rarely resuming its normal position.

In post-mortem examinations, the left lung is found with difficulty, being compressed against and adherent to the pericardium. Its tissues are hard, fibrous, elastic, impermeable to the air,—in a word, sclerosed. Hence the pulsation is due to the beats of the heart being forcibly transmitted by the sclerosed lung to the purulent collection.

The treatment of pulsating empyema is rarely successful, on account of the structural alteration of the left lung, the displaced heart, and the debilitated or tuberculous condition of the subjects. Thoracentesis is, of course, indicated; but the remedy is, as the rule, merely palliative.

In concluding his memoir, the author insists upon the facts that a left pulsating pleurisy is a purulent pleurisy, and that the function of the corresponding lung is entirely abolished, which is a sign of the incurability of the affection.

THE ADDRESS OF PROFESSOR PARVIN, which appeared in our Educational Number, was printed from copy which we received directly from the hands of the author, and we believe it to be the only correct version of his lecture which was published up to that time.

*Valedictory poem, by the late Prof. J. Aitkin Meigs, M.D.

SOMETHING FOR OUR MEDICAL SOCIETIES TO TAKE NOTE OF.

THE Board of Trade of Philadelphia Druggists has passed a resolution, to which the support of a number of our principal druggists is pledged, that after January 1, 1884, the said druggists will positively refuse to keep or deal in those proprietary medicines which are sold indiscriminately to individuals engaged in other kinds of business than dealing in drugs. Certainly, any step of this kind should be formally noticed by our medical societies, which should use every means in their power to discourage the sale of nostrums. The present time may be favorable for the establishment of pharmacies where physicians' prescriptions are compounded and no patent medicines sold.

SHALL THE INDEX MEDICUS BE DISCONTINUED?

IN a circular issued by the publisher, Mr. F. Leyboldt, it is stated that "Five years' publication of the *Index Medicus* has proved conclusively—

"1. That the mere cost of production (per annum) is not less than \$5000. .

"2. That the maximum return from subscriptions, at six dollars per annum, has not exceeded \$3600.

"3. That the increase of subscriptions during the past two years has been merely nominal.

"4. That the limited circulation permits no material return from advertisements."

The publisher also states that he agrees with the editors that, in justice to themselves, as well as to those whose generosity has already been severely taxed, the *Index Medicus* must no longer be dependent on voluntary communications. The undertaking must either be abandoned or at once placed on the business-footing of an equally-shared support. There are about six hundred subscribers, to whom the

question is pointedly addressed whether they will increase the amount of their annual subscription to ten or twelve dollars per annum, if necessary. A prompt answer to this query is needed in order to make the necessary arrangements for the ensuing year, if the work is to be continued. This work has reflected honor upon American medical journalism. It is more than a credit to our medical literature: it has become almost a necessity to all who have occasion to consult it. We feel certain that the profession will not willingly allow it to be abandoned, without some effort to establish it upon a more secure and satisfactory foundation.

LEADING ARTICLES.

PTOMAÏNES.

IN 1872 the late Professor Selmi presented to the Academy of Bologna a paper embodying some curious and interesting results which he had obtained by treating both fresh and partially-decomposed viscera according to the Otto-Stas method for the separation of alkaloids. Although the tissues under experiment could have contained no vegetable alkaloids, he at times obtained extracts which responded to the general tests for these substances, and which corresponded to no compounds which had hitherto been separated from animal tissues. Attributing these reactions to basic compounds of animal origin, he gave to such alkaloid-like bodies the general name *ptomaïnes*.

Several attempts had already been made to isolate the toxic principle of decomposed tissues, but the results were of a character to attract little attention.

Selmi continued his experiments during six years, and in 1878 published a remarkable paper, "*Sulle ptomaïne od alcaloidi cadaverici e loro importanza in tossicologia*," in which he described ptomaïne reactions simulating those of conine, morphine, atropine, and delphinine. Two medico-legal cases had occurred in Italy, in which the first examination had indicated the presence of morphine and delphinine in the cadaver, but in which a second analysis, under the direction of Selmi, had

shown no trace of either of those substances, but the existence of abundant ptomaines.

The importance of arriving at more precise knowledge concerning compounds, the suspected presence of which might invalidate chemical testimony in capital cases, led to the appointment by the Italian government, in 1880, of a commission, composed of the late Professor Selmi and Professors Cannizzaro, Guareschi, Moriggia, Mosso, Paterno, Spica, and Toscani. The expenses of the investigation are, at least in part, defrayed by the government, but the work has been conducted individually. A few papers have already appeared.

In the mean time, several other chemists have engaged in the same line of research, and practically the results have been sufficiently concordant to indicate the existence of a series of ptomaines, of which a limited number have finally been isolated in sufficient quantity to permit of analysis.

Selmi described the first separated of these bodies and the physical characters of its hydrochloride to the Academy Lincei in 1880. The alkaloid resembled conine, and its effects on animals to which it was administered were similar to those of curare. Th. Husemann's experiments afterwards fully confirmed these results.

In 1881 Armand Gautier demonstrated the basic nature of the bodies in question by their power to neutralize strong acids, and by the crystallization of their chloroplatinates, etc. In 1882 the same chemist called attention to the early history of the subject. The first step seems to have been made in 1856, by Panum, a Dane, who obtained from putrefied dog's flesh a poisonous extract, which he called *sepsine*. Eighteen years later Panum maintained the non-alkaloidal character of this poison. Bergmann and Schmiedeberg investigated sepsine in 1868; and in 1869 Zuelzer and Sonnenschein extracted from cadavers alkaloidal substances which they believed to be different from those which had before been obtained. These bodies produced dilatation of the pupil.

Gautier's first experiments seem to have preceded those of Selmi: they are mentioned in his "*Chimie appliquée à la Physiologie*." Indeed, Selmi states that Gautier seemed to have underestimated the importance of his first results, from which he concluded that "these same alkaloids are often produced abundantly in living

animals, and are constant and necessary products of normal tissue-life."

In collaboration with A. Etard, Gautier undertook extensive experiments in 1881. The first researches concerned the different phases of putrefaction. The results indicated that the true putrefactive fermentation begins with the disengagement of nitrogen; the large bacilli and bacteria are then replaced by exceedingly small, tremulous bacilli, having highly refracting heads, some straight, some serpentine. These attack the albuminoid molecules, and there is an evolution of hydrogen sulphide and hydrogen phosphide, while leucines, leucines, skatol, indol, carbylamines, and ptomaines are formed.

By the following process Gautier and Etard succeeded in isolating two bases from putrefied fish (mackerel). The liquid products of the fermentation were separated from oily matter, etc., acidulated with sulphuric acid, and evaporated in a vacuum; the phenol, indol, etc., were thus driven out. The residue was neutralized with baryta-water, filtered, and the filtrate agitated with chloroform. After the evaporation of the chloroform, the residue was extracted with solution of tartaric acid, and the addition of potassium hydrate liberated the bases, which were fractionally extracted with ether, and dried in a vacuum. From the first ethereal extracts a base was obtained having the composition $C_8H_{13}N$. The last extracts yielded another alkaloid, to which analysis seemed to assign the formula $C_8H_{13}N$.

M. Nencki claims to have separated these bases from the products of the decomposition of gelatin in presence of pancreas. From a single analysis of the chloroplatinate, in which he estimated the carbon, hydrogen, and platinum, he gave the composition $C_8H_{11}N$.

L. Brieger, of Berlin, has recently obtained ptomaine reactions from peptones prepared by the action of gastric juice on egg-albumen, and in one case from a commercial peptone. The base could not be isolated, but the extracts manifested decidedly poisonous properties. The following process enabled him to obtain a pure ptomaine. Finely-chopped horse-flesh was mixed with water and kept at a fermentation temperature for five or six days, after which the broth was filtered and the liquid precipitated with lead acetate. The filtrate from the lead precipitate was freed

from lead by means of hydrogen sulphide, and the filtered liquid evaporated to a syrupy consistence and extracted with amyl alcohol. The extract was repeatedly exhausted with water, and the solution evaporated. The watery residue, strongly acidulated with sulphuric acid, was shaken with ether to remove the oxygen acids, and then evaporated to a fourth of its volume to drive out the volatile acids. After precipitation of the sulphuric acid with baryta-water, the solution was treated with mercuric chloride, and the washed precipitate suspended in water and decomposed by hydrogen sulphide. The inorganic salts which first separated on the evaporation of the clear filtrate were filtered out and washed with absolute alcohol. Then from the united liquids an organic substance crystallized in long needles, which were readily soluble in water and alcohol, but insoluble in absolute alcohol, ether, and chloroform. These crystals are the hydrochloride of a base, $C_5H_{11}N$, which decomposes when attempts are made to isolate it from the salt. Half-gramme doses of the pure salt administered to rabbits produced only feeble symptoms of poisoning, but the unpurified extract manifested toxic properties similar to those of the peptone extracts already mentioned. Indeed, the liquid from which this salt crystallized contained another and much more poisonous base, which appears to have the composition $C_5H_{11}N$, being isomeric with piperidine. Administered to rabbits, guinea-pigs, and cats, this compound produced characteristic symptoms, one of the more notable being an abundant secretion of thick, alkaline saliva and nasal mucus. In one case the paws of a cat, dry before the administration of the poison, became bathed in an abundant alkaline perspiration. Internal administration produced the same symptoms as hypodermic injection, but required a much larger dose. In either manner large doses were followed by death after short tonic and clonic spasms.

E. and H. Salkowsky have extracted from putrid flesh and fibrin a basic compound to which their analyses assign the composition $C_5H_{11}NO_2$. This body possesses no poisonous properties, and does not appear to be a ptomaine according to the sense in which that name is received. Its reactions are not described. Its composition is that of an amide of valeric acid.

The most valuable work which has been

conducted is described in a recent memoir by Guareschi and Mosso. The researches appear to have been conducted in a most thorough manner, and the results are of especial importance in that they have led the authors to condemn Dragendorff's method for the separation of alkaloids in medico-legal cases.

They first examined the solvents ordinarily employed,—ether, alcohol, amyl alcohol, chloroform, and benzol.

When commercial alcohol is evaporated to dryness with a small quantity of hydrochloric or tartaric acid, there is always a residue, which, when exhausted with ether according to the usual method for the extraction of alkaloids, yields an extract that responds to the alkaloid reactions. For use in medico-legal cases, or researches for ptomaines, alcohol must be purified by one or sometimes two distillations over tartaric acid.

Ether is sufficiently pure when twice washed with acidulated water and then distilled over lime.

Amyl alcohol (the purest of commerce) contains five-tenths per cent. of pyridine, and its use must be avoided (Uslar and Erdmann's process).

Chloroform may be purified by washing with water, then with solution of potassium carbonate, and final distillation over calcium chloride.

The purest crystallizable benzol of commerce yields, by distillation with potassium hydrate, an aqueous residue containing pyridine.

From these preliminary experiments the authors conclude that all the results heretofore obtained by different observers who used alkaline extracts prepared by means of amyl alcohol and benzol, are absolutely without value, whether the experiments have been made on putrid or on fresh materials.

Thirty-six kilogrammes of human brains were then allowed to putrefy during two months, and the homogeneous broth was treated according to the Otto-Stas method. Only an insignificant quantity of ptomaines was obtained, so small that no analysis could be made. The extract, in doses of 0.0125 to 0.3 gramme, was administered hypodermically to frogs. The effects were analogous to those of curare, but the action was much less energetic, more of the poison being required to produce an effect comparable to that of a given dose of curare:

even when the intoxication was very great it passed off much more rapidly than that due to curare. The larger doses were, however, fatal. Experiments made on a guinea-pig showed that, so far as its physiological action is concerned, "the extract of putrefied human brains cannot be confounded with any of the poisons usually employed in criminal poisonings, for incomparably smaller doses of curare, conine, nicotine, etc., would have produced much more serious symptoms, or would even have killed the animal."

Experiments were made with fibrin, in hopes that the definite and unique character of that body might yield less complex compounds than mixtures of blood, flesh, etc.

The product of the decomposition of eighty kilogrammes of ox-blood fibrin, left to itself during five months, was treated according to the process adopted by Gautier and Etard in the experiments already mentioned. The strongly alkaline extract obtained on the evaporation of the ethereal solutions was neutralized with hydrochloric acid, and the dry residue of a new evaporation formed crystalline double salts with platinic and auric chlorides, and responded to the general tests for alkaloids. An analysis of the platinum compound indicated the composition $C_{10}H_{15}N$ or $C_{10}H_{13}N$. Eleven chloroform extractions were made in these experiments, and each extract was treated separately and the base analyzed. The results were sufficiently concordant with those required by the preceding formulas. If the latter of the two formulas given be correct, this base may be homologous with those obtained by Gautier and Etard. Experiments on frogs and birds showed that the action of these bases corresponded to that of the extract from putrefied brains. The effects of the hydrochloride are more marked than those of the free base.

From fresh brains, treated by the Otto-Stas process within twenty-four hours after death, Guareschi and Mosso obtained small quantities of residues which responded to the general tests for alkaloids.

Perfectly fresh beef was extracted by Dragendorff's method, using sulphuric acid and water, evaporating the liquid to syrupy consistence, and exhausting this syrup with alcohol. Towards the end of the distillation of the alcohol a volatile substance which appeared was condensed in

hydrochloric acid. The residue gave full indications of the presence of alkaloids; and the hydrochloric acid solution, neutralized with ammonia and exhausted with ether, yielded a small quantity of extract having an odor like conine, and responding to alkaloid tests.

In order to determine whether the sulphuric acid used in this operation had caused the formation of these bodies, the experiment was repeated on the same quantity of meat (fifty kilogrammes), tartaric acid being substituted for the sulphuric. The quantity of products obtained was much smaller,—only about one-tenth that yielded by the first experiment,—but a microscopic examination of the platinum precipitate gave evidence of a body very similar to the chloroplatinate of the base extracted from putrid fibrin. "The results obtained by the aid of Dragendorff's process are then very different accordingly as sulphuric or tartaric acid is employed. In the first case an abundant acid-ether extract contained lactic and succinic acids, and there was a relatively large alkaline ethereal extract. Both extracts were much smaller in the second case, and succinic acid could not be detected. These comparative experiments show that in the extraction of fresh animal tissues by Dragendorff's method the products obtained are due, at least in part, to the decomposing action of the sulphuric acid." These experiments show that this method is to be avoided. The Otto-Stas method, on the contrary, yields good results, especially if only that quantity of tartaric acid be employed which will give an acid reaction to the mixture, and the evaporation be conducted at a low temperature, or, better, in a vacuum. Fresh materials treated in this manner yield almost no ptomaines, and successive purifications eliminate them entirely.

Experiments made on fresh meat, without the addition of acid,—and the natural acidity of the flesh justifies this mode of extraction,—showed that the exceedingly small quantities of alkaloidal bases obtained were probably formed during the evaporation of the liquid, owing to alterations in the albuminoid matters. The matter which crystallizes from the ether in this case gives no alkaloid reactions. It was found to be methyl-hydantoin.

These results of Guareschi and Mosso are confirmed by some experiments by F.

Coppola, who extracted from the fresh blood of a healthy dog relatively large quantities of poisonous ptomaines by Dragendorff's method, but, in operations in which no reagents were employed other than the chloroform used for extraction, obtained no evidence of the presence of ptomaines.

The investigations of which we have summarily considered the results have been faithfully conducted by chemists and physiologists concerning whose work there can be no question as to accuracy. The experiments are in one respect unsatisfactory, in that they have not solved the problem of the exact conditions under which ptomaines may be formed. In this they resemble the greater number of chemico-physiological researches. However, the later results are of unquestionable importance in their bearing on the methods employed in medico-legal investigations, and indicate that, when proper precautions are adopted, cadaveric alkaloids need not be confounded with the vegetable alkaloids used as poisons.

The exceedingly small quantities of the bases which have been separated have in so few cases permitted a study of the physical and chemical properties of these compounds, that they are practically recognizable only by the general alkaloidal tests and their physiological effects. For equal doses these effects are so much less energetic than those of other and similar poisons, that careful comparative experiments may remove all fallacy which the existence of ptomaines might appear to indicate as objections to physiological tests in the search for an unknown poison. A neglect of such comparison would at present probably throw doubt even on such results as those obtained by Tardieu and Roussin in the La Pommerais case.

Nothing that has been developed in the study of ptomaines indicates that these bodies are the cause of septic poisoning as we ordinarily understand that term. The alarming blood-poisoning which may follow an insignificant scratch on the finger could be accounted for by the introduction of an infinitesimal quantity of a purely chemical compound into the system, only should that compound possess the energy of the rattlesnake's venom, or should it act as a non-organized ferment capable of profoundly modifying an indefinite quan-

tity of matter. No such ptomaine has been isolated. However, few of the experiments thus far made have thrown light on the effect of time on the stages of putrefaction, and it is possible that the bases present at a given epoch may have existed only during a short period, and may be entirely transformed at a later stage of the almost hopelessly complex reaction. The time, patience, and expense necessary for such researches have limited their number, and the valuable results contributed by Italian experimenters would probably be yet unattained without government co-operation and liberality.

It seems certain that ptomaines do not pre-exist in normal tissues, and it is highly probable that the ptomainic reactions obtained by Gautier from urine, and by Paterno and Spica from fresh egg-albumen and blood, were due to bodies produced during the processes of extraction. The statement of Mourson and Schlagdenhauffen, that ptomaines exist in the amniotic fluid, is open to the same criticism, especially as mere traces of their presence could be detected.

It would not, however, appear strange that under certain conditions the urine, and even the blood, should contain toxic bases. Brieger opens a weighty question in stating that "in a large number of infectious and intestinal diseases death takes place rapidly, and under such circumstances that there can be no other explanation than that of the sudden formation of toxic substances by fermentation in the body." All the recent publications on the genesis of ptomaines are in accord that such genesis does not take place during health. Experiments on conditions of the urine and blood in certain diseases may throw a new light on the immediate cause of death, which may not be due to bacilli, but to the fermentation-products produced by the bacilli. If by changes in the albuminoid matters the blood become charged with poisonous bases, why should not the antidote for such poisons be sought in the laboratory and then applied in practice? This field of physiological research is certainly an open one, and may possibly be as fertile as has been that of pathological microscopy.

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WILLIAM H. GREENE.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO LETTER.

NOTWITHSTANDING the excellent laws we now have for governing the practice of medicine, for some reason or other, a score or so of advertising "specialists" have been for a long time more brazen than ever before, and the Sunday editions of the daily papers have contained columns of nastiness in the form of their advertisements.

A few days ago, somebody set the machinery of the law in motion, and quite a number of the "specialists" have been arrested and brought before the court to give bail for reappearance. Spasmodic attempts to enforce the law had been made at different times, but all had ended without accomplishing much.

Let us hope that the present effort may be more successful in permanent good.

Like New York, we have a liberal allowance

of stench-factories, and the Health Commissioner has from time to time tried to suppress their offensiveness, never with complete success, however. The stench-factories now resort to the method of holding in their store of offensive and nauseating gases during the day, and pouring them out during the night or early hours of the morning, when the population is asleep; but those who have open windows, or ventilators connecting with the open air, are painfully reminded how difficult it is to secure a refuge from this great public nuisance.

The building at present occupied as a Hospital for Women and Children proves inadequate for the purpose, and it is proposed to erect a new building calculated to accommodate from eighty to one hundred and fifty patients.

Plans are now being prepared, and the work of construction will at once be pushed forward.

The new Rush College Hospital is making rapid progress, and will be ready for occupation early next spring. The Cook County Hospital has two new pavilions ready for service, giving an increased capacity of about one hundred and fifty patients. The health of the city, in spite of the quacks and the bad odors, remains exceptionally good.

CHICAGO, December 5, 1883.

CORRESPONDENCE.

LONDON LETTER.

WE have recently had a very unpleasant episode in the medical profession,—the more unpleasant in that it shows that the medical profession is not as true to itself as it might be and ought to be. The utility of the nitrites in medicine is now fully established, and a very important armamentarium they have proved. Dr. B. W. Richardson established the effect of amyl nitrite upon the vasomotor system of nerves,—relaxing the walls of the smaller arterioles, and, therewith, lowering the blood-pressure within the arteries. Then Dr. Lauder Brunton, finding the blood-pressure raised in angina pectoris, used the amyl nitrite with marked good effect in a severe case of angina. Since then the use of nitrites has spread rapidly. Then nitroglycerin came up, and in its use Dr. Murrell holds an honored and conspicuous as well as well-won reputation. More recently still, Dr. Law, of St. Leonard's-on-Sea, has used the nitrite of sodium in the treatment of epilepsy, where there is often a rise in the blood-pressure as the fit comes on. Whatever the hypothesis upon which the drug is given is scarcely to the present purpose: the clinical aspect is the one here interesting us. Dr. Law reported a case of epilepsy in which he had given twenty grains of sodium nitrite without any ill ef-

fects. From observations afterwards made by Dr. Ralfe, it seemed that the preparation used by Dr. Law was very impure, being largely adulterated with the *nitrate*: hence the harmlessness of the twenty-grain dose. Unfortunately, the dose of sodium nitrite given in the last edition of Prof. Ringer's famous work on "Therapeutics" is a scruple; and, in consequence thereof, the widest publicity on this matter is desirable, as this is a very dangerous, if not actually lethal, dose of the pure drug. The subject of the impurity of the ordinary sodium nitrite was brought before the profession in October last year, and Dr. Murrell thought it good and desirable to test the action of the nitrite, in order to clear up the subject. According to his explanation, he thought it well to see if sodium nitrite was superior to nitro-glycerin in some maladies, in the interests of his patients,—a perfectly valid and sufficient reason to unprejudiced minds. To one patient ten grains were given without obvious effects, and the dose was raised to fifteen grains. To a second patient ten grains were given with very decided toxic symptoms, of which giddiness, sickness, and a feeling of fulness in the head were prominent. He had also other symptoms. With the experience of the first case before him, Dr. Murrell urged the patient to try it again; but he declined, on the plea that he "had a wife and family." This was put forward rather in joke than in serious earnest, as the man disliked the sensations. Other patients came back complaining of allied disagreeable sensations, and then Dr. Murrell recognized the fact that sodium nitrite possessed toxic properties. He then reduced the dose to five grains, and subsequently again to three grains. He then communicated his observations to Prof. Ringer, with whom he has prosecuted much therapeutic research. Ringer experimented on some cats to test the action of the drug, with such results that a conjoint paper on "Nitrite of Sodium as a Toxic Agent" appeared recently in *The Lancet*. Dr. Murrell has explained, since the thunder-storm arose, "There has been nothing in the shape of experimentation, and I have prescribed nitrite of sodium only in those cases in which, from my previous experience with nitro-glycerin, I was convinced that it would prove useful." The value of a statement depends upon a man's character; and Dr. Murrell bears the reputation of a truthful man. Consequently, this statement may be accepted without reserve. In giving an account of the observations, Dr. Murrell did not foresee that the matter would come prominently before the public, and so laid himself open to attack, which attack was soon made by a suburban clergyman who had seen *The Lancet*. The object of the paper was to point out that two—and not twenty—grains constituted a sufficient dose of Morson's sodium nitrite. To the medical mind the value of such a

paper, under the circumstances, is apparent enough.

The world-wide sale of Prof. Ringer's book called for a prompt and convincing statement of the actual facts. "A plain and straightforward statement of facts" was made. The committee of investigation of the matter stated their opinion on the subject thus: "The sub-committee, after careful consideration of these facts, see no reason why the House Committee should withdraw from Dr. Murrell their confidence in his ability and humanity, and they trust that the unfortunate manner in which the paper was put together will be forgotten, while the value of his experiments will remain. In this connection, the sub-committee would call attention to the fact that, in consequence of this experience, the 'official' dose of nitrite of sodium, hitherto appearing in the standard text-books of therapeutics as twenty grains, has since been reduced to two grains, and a permanent source of danger has thus been averted." A very sensible conclusion, it seems. The clergyman, however, saw only the sensational side of the subject, and wrote a long and forcible letter to *The Standard*, which must have carried joy and delight to the hearts of the anti-vivisectionists, always a lively and obstreperous set. It was said, if experimentation upon animals was stopped, then experimentation upon human beings would follow; and, lo! here was the full and complete verification of the prophecy. Poor hospital patients!—experimented upon when they sought relief from their maladies! Could any more convincing proof of the immoral tendencies of the 'scientific' physician be required or furnished? Howls of execration, attended with delight, went up from the anti-vivisectionists; wails arose from the better-disposed section of society at such lapses in the medical character. Of course, a storm in a teapot blew with an unusual energy. The authorities of University College protested that these experiments had not been conducted at their institution, to which Prof. Ringer is physician. The authorities of Westminster Hospital put in their certificate that it was not in their institution Dr. Murrell had performed his experiments. Where they were carried on I do not know. Then stepped forward one of Dr. Murrell's colleagues (I will refrain from mentioning his name, for which I am sure the day will not be far distant when he will thank me), though it is impossible to avoid commenting on what he has said and done. He wrote a letter to *The Standard*, signed "A Hospital Physician," but subsequently in a signed letter to the *British Medical Journal* he repeats what he said in his previous letter. As a colleague, it was scarcely his duty to step forward to lash Dr. Murrell; as a physician who is not specially known in connection with experimental research, he was not particularly involved. However, he did come

forward to assail his professional brother; and, after assaulting him under a *nom de plume*, he throws off all disguise and goes for him again in his own name. He thinks it necessary to the good name of the profession to set his face against such proceedings; and, while his courage may excite the admiration of some, his temerity has roused the indignation of others. The editor has come down upon him hotly, as the following extract will show: "With the chivalry which rushes into print in a lay journal, under a pseudonyme, to hand over a brother practitioner to the tender mercies of 'a hostile party' in the public press, and helps, 'in the name of science and humanity,' to brand his reputation with levity and flippancy in the discharge of his difficult and sacred duties, we have no sympathy."

The Medical Press and Circular eases its mind in emphatic language upon the subject "of open-handed attacks made by one physician against another. We have, unfortunately, had occasional, but still rare, examples; but never, even in the worst cases of professional bickering, do we remember an instance in which cowardly resort to anonymous publication has been adopted by any one of position in the world of medicine. Bad as the original offence was in the sight of every honorable person, it is greatly intensified by the ill-judged letter which he has set forth apparently in justification. He should clearly understand that the conduct of a man who slanders his colleague from behind the shield of anonymity is without the pale of forgiveness by every one of his professional brethren who place honor before material gain; and anything that he may say in extenuation of his gross breach, not only of etiquette, but of morals, will only intensify the feeling with which his act is generally regarded." These are no doubtful utterances; and the gentleman has clearly been guilty of conduct which the medical profession unsparingly condemns. But both are Fellows of the Royal College of Physicians; and the College guarantees the behavior of its Fellows and members towards each other. To be sure, it cannot—being fallible, like all other human institutions—always secure good conduct from its Fellows, sad to say. But a great parade is made of withholding the Fellowship from sundry men for unprofessional conduct (under which pretext a good many men are injured who have not been guilty of any unprofessional conduct); and much is said about its watching over the behavior of its members and Fellows. It now remains to be seen what the College will do.

Some scandals occurred a few years ago in which a well-known medical baronet not only broke its rules, but actually snapped his fingers at the College afterwards, apparently with impunity. But then he was such a big fish! Now that the culprit is not quite such a whale, it will be curious to see how the old

lady will proceed to deal with him. If he escapes without chiding, or, indeed, some more substantial mark of her wrath, then the rule about guaranteeing conduct had better have "obsolete" written across it, and all talk about "withholding the Fellowship for unprofessional conduct" be relegated to the charnel-house of the dead past, the only place for it in that case. One cannot but sympathize with the censors brought face to face with such an unpleasant affair. It is so delightfully easy to keep a man out of the sacred order if several of the august personages who rule the roost only choose to do so. But how about any energetic action when the culprit is in?

The College has held a meeting and decided "to take such steps as they think needful." The medical world looks on patiently to see what the needful steps are. Instead of action *in camera*, the censors must act in the open light of day, within the sight of the public. A subject of no little interest to the psychologist is thus afforded to him. It is to be devoutly hoped that the authorities will this time show the medical world that they can act upon occasion; for a more flagrant instance of insubordination can scarcely be required for them to do something. It is high time that the censors remember the dignity of the College and what is owing to public opinion, and to demonstrate to the world at large that its rules can be operative. The College has great capacity in petty matters. Perhaps it has more backbone than its mockers give it credit for. Sir William Jenner, the President, is a man who holds the chieftainship of the medical profession without a dissentient voice, and every one has the utmost confidence in him. But the President cannot transform all the elements of the College into men who dare act openly, and it is by no means absolutely certain that all the fifteen units of the Censors' Board can be elevated to his standard. It is certain—as certain as anything can be in a finite world—that this scandal will not improve the position of the profession in the eyes of those who hold it cheap,—a considerable section. It is equally certain that "the unfortunate manner in which the paper was put together" will be utilized by the anti-scientific portion of the public, known as the anti-vivisectionist party, to the utmost. The most will be made of the patient's allusion to "his wife and family," and of the symptoms which the sodium nitrite produced. A grand dish will be served up out of these materials, on which the party can feast sumptuously. And there is a large and comparatively compact body of the public who never miss an opportunity of decrying orthodox medicine. They are dissenters in religion, and radicals in politics. They hate meat and drink, are vegetarians and teetotallers. They speak of medicine as "allopathy," and have unbounded

faith in globules. They detest Jenner's discovery of the value of vaccination, which they hold at once to be useless as a protective against smallpox, and the vehicle for communicating disease. This active, mischievous body will seize upon the subject and gloat over it with an exquisite sense of enjoyment. Leicester will mock. Leicester has set its face against vaccination sternly, uncompromisingly; just as Keighley did some years ago, till a sharp outbreak of smallpox taught the natives a thing or two they either did not know or did not choose to acknowledge. Recently one of the infidels as to vaccination was sent to prison, and the people made him a martyr. When he emerged from the portals of his prison he was a hero who received a grand ovation, instead of a silly fellow who deserved all he had got. And now there is disorder and almost riot among the stocking-weavers, who, of course, only know what their leaders choose to tell them. As to the great facts, they shut their eyes to them. As to straining at the gnat and swallowing the camel, no Pharisee of old could give the anti-vaccinationists points. They see in vaccination a means of spreading disease, which is lucrative to the medical profession, who consequently uphold it. To all those and such like this affair will furnish grand matter for declamation and scorn. Knowledge may come to a stand-still; medicine may become as static and non-progressive as the pyramids of Egypt or the pillars of Baalbec. What care they? If they prefer smallpox to vaccination, why should they not in a free country? The right of private judgment is the great feature of Protestantism, and Leicester has advanced far beyond Protestantism. If they choose to have smallpox, why should they not? Certainly, and cultivate the malady till it becomes dangerous even to their vaccinated neighbors! But if your neighbor does not care about the risk, how then? Well, kick up a row till he thinks smallpox the lesser evil of the two. It is a solution of the difficulty, certainly.

In the North country there is a saying to this effect: "It takes one of all sorts to make a world." It certainly does. But an ignorant Leicester stocking-weaver howling for smallpox and abusing the medical profession is scarcely so sad a spectacle as that of one Fellow of the Royal College of Physicians stepping out under a pseudonyme to poniard a colleague in the dark. The profession whose "good name" this champion so chivalrously upheld had, indeed, better look to its custodians. If these Fellows of the College cannot act with a little more sense of propriety, some more care of what is due to a professional brother, the poor stocking-weaver may well point the finger of scorn at medicine. Let the College act with dignity, and then those whose conduct needs some guarantee in order to be decorous, if not decent, will go

in real fear of it. Continenence is not chastity. Virtue has a shifting value. One man may behave himself from self-respect, another only because he fears the penalty if he should fail. But when a man steps out of his way to stab a professional brother, not to say a colleague, then the offence is one which carries with it no extenuating circumstances. It is not a venial lapse; it is the commission of a sin. If the College cannot act in this case, then men who only behave well under the penalty will feel at liberty to act according to their inner promptings. A strong, vigorous action on the part of the College would reinstate it in the opinion of the profession, and possibly, too, in that of the public. Not that all shortcomings in the past should be atoned for by unmeasured severity in this particular instance: no reasonable person wishes that. What is to be desired is that the governing body will do something to show that its canons are not to be outraged with immunity from consequences. If unprofessional conduct has to be punished by withholding the Fellowship from offenders, surely such conduct in a Fellow ought to meet with appropriate recognition. If Fellows of the College are allowed to set a bad example unproved, others will be tempted to follow; for it is desperately easy for a weak man to follow a bad example. The profession has its reputation to maintain, and may, apparently, thank its stars that it has not to make it. It looks as if it would take it all its time to uphold what others have won. What action the College will take in this emergency waits to be seen; but the eye of the world is upon it.

J. MILNER FOTHERGILL.

CHARLATAN.—The *Apotheker Zeitung* gives the origin of this word as follows: In the olden time, when the doctors, sitting in their studies, weighed the ills of their fellow-man, and searched the depths of nature for remedies, they were not in the habit of riding about; their homes were hospitals, and they did not leave their patients. At that time a genius of a doctor, who knew more about calculating for himself than medicine, made his appearance in Paris. His name was Latan. He procured a small one-horse wagon (*char*), upon which he packed his remedies for all possible affections. With these he drove through the streets of Paris, crying out his wares and looking for patients. He was the first driving doctor, and soon became renowned. Whenever he came along, the populace greeted him with, "Voilà le char de Latan." This was soon abbreviated to "Charlatan," which, at that time, denoted a driving doctor.—*Weekly Drug News*.

CODEINE PHOSPHATE has been prepared by Merck, at the suggestion of Prof. Hegar. It is soluble in four parts of water, and is suited for hypodermic injection.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, DECEMBER 6, 1883.

The PRESIDENT, R. A. CLEEMANN, M.D., in the chair.

DR. W. GOODELL exhibited

TWO CYSTS OF THE PAROVARIVM.

In commenting upon these specimens, he remarked that both patients got well; he, indeed, had never lost a patient from whom he had removed a parovarian cyst. In both cases, a correct diagnosis was made previous to the operation. One interesting diagnostic point was the complete absence of the *facies ovariana*. The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarian tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor, but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity, but, when the hands are placed upon its sternal edge, it can be compressed to the level of the umbilicus. An ovarian cyst, on the contrary, is hard and incompressible. Exceptions to this rule are very rare,—that is, either a tense parovarian cyst or a flaccid ovarian one. A third important distinguishing point is the long time—ten years in one case—which the tumor existed, and, further, without marked deterioration of health. After being tapped, these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid, and generally colorless, but it has sometimes had in his experience an emerald tint. These tumors are generally free from serious adhesions, but if in an operation for the removal of one, adhesions should exist, where for any reason their forcible separation would be inadvisable, or the cyst were intra-ligamentous, he would not hesitate to leave the adherent portion of the cyst-wall, or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritoneum.

Any one examining one of these cysts for the first time would consider it to be of ovarian origin; for it is only by patient search that the ovary can be found spread out over the cyst-wall. The microscope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful net-work of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased, and should be

removed. In these cases, the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The Fallopian tube was also enlarged, and the terminal vesicle of the Fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This vesicle sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago, one of these small cysts ruptured while he was making an examination of the patient to ascertain its character.

Dr. GOODELL exhibited a

CANCEROUS WOMB REMOVED PER VAGINAM.

In view of the very fatal statistics of the operation for the removal of the womb for the radical cure of uterine cancer, he had hesitated to perform it. In most of the cases where the disease had been seen early enough by him to give a chance of success, the patient had been unwilling to take the risk. On one occasion, when every preparation had been made to operate, the patient had a convulsion, and an examination of the urine showed a high proportion of albumen, in consequence of which he refused to operate. About a month ago, Dr. Charles A. Dulles called him in consultation to see a patient in whom the carcinomatous condition was limited to the anterior lip. The womb was movable. The case was put frankly before the patient, and all its dangers were pointed out. The choice of operations being given to her, she decided, after due consideration, to take the risks of the radical one. The operation was not as difficult as he anticipated.

The first step in the operation was to scrape away all cancerous tissue and to sear the remaining surface with Paquelin's cautery. The vagina was then thoroughly cleansed. A stout thread was passed through the cervix, to draw down the womb, instead of using a volsellum, the handles of which would be in the way. A circular incision was made around the cervix, and the tissues were stripped up anteriorly and posteriorly to the reflection of the peritoneum, and laterally to the insertion of the broad ligaments. Finally, the peritoneum was opened and the womb retroverted into the vagina by means of the obstetric crochet passed over the fundus. A strong thread was now passed through the body of the uterus, by means of which to manipulate it more easily. A ligature was now passed around the broad ligament of the right side and secured it *en masse*, and a second double ligature was passed through it and tied on opposite sides. This side of the broad ligament was then divided, the uterus drawn down, and the ligament of the left side secured in a similar manner and divided. The vaginal wound was closed and dressed with iodoform and cotton. A frank peritonitis set in on the third day, and proved fatal on the fourth. The result made him doubtful whether the

operation is a legitimate one; he, indeed, felt disposed to avoid it whenever possible.

Dr. E. E. MONTGOMERY inquired about the feasibility of using the galvanic-wire *écraseur* to divide the broad ligament, keeping the wire at a low red heat and dividing the tissues slowly, and avoiding the necessity for a drainage-tube. Another method which he had been revolving in his mind was by means of the galvanic knife to dissect out the uterus, leaving the peritoneum intact, thus imitating to a certain extent the operation of Dr. Marion Sims of scraping and the use of zinc chloride.

Dr. GOODELL thought that Dr. Montgomery's galvanic wire would get too hot as the loop became small, and would then divide rapidly like a knife, and incur the danger of secondary hemorrhage. He fears that the steam generated by the hot wire would penetrate the peritoneal cavity and have an irritating effect. He has a galvano-cautery battery, but has not used it since the introduction of Paquelin's benzoline cautery, as he finds the latter far more handy and manageable. He thinks Dr. Montgomery's suggestion of shelling out the uterus a very good one.

SPECIMENS FROM A CASE OF BATTEY'S OPERATION.

Dr. MONTGOMERY exhibited, through the courtesy of Dr. W. H. Warder, the uterine appendages which had been removed from a young lady for the relief of dysmenorrhœa which had resulted in physical and mental failure. Menstruation had commenced at the age of fourteen years, had always been painful, and had developed hysterical manifestations. Bathing at the sea-shore had at one time stopped the periods for three months; after this her health failed, her mind had been seriously affected for the last three years, and she would run away or do herself some violence at the menstrual periods if not closely watched.

Examination.—The uterus was enlarged and tender; there was profuse leucorrhœa. The os uteri was dilated, and the uterine cavity scraped and cauterized with carbolic acid, and bromides, etc., used internally, but no improvement resulted. The ovaries were removed to-day through abdominal section; catgut ligatures were used. The ovaries are very much enlarged, and contain small cysts. The abdominal wound was closed with silk sutures, and covered with an impervious dressing of collodion, cotton, etc.

HYSTERO-EPILEPSY AS A COMPLICATION OF PREGNANCY.

Dr. WILLIAM H. SHIPPS, of Bordentown, New Jersey, sent the following contribution:

Briefly defined, hystero-epilepsy is a term applied to an abnormal neurotic condition in which are manifested certain phenomena characteristic both of hysteria and of epilepsy. Out of two hundred and seventy-six patients

confined at La Salpêtrière Hospital, Paris, under treatment for various nervous affections, thirty-two were diagnosticated by Beau, a careful observer, as suffering from this disease. Among this number the malady assumed either a distinct or a combined form: hence he very wisely groups the cases into two classes. In the first, the hysterical seizures and epileptic fits remain distinct one from the other; to this form he adapts the term given by Landouzy, and designates it as hystero-epilepsy with distinct crises.

In the second class, and the one of which this article furnishes an illustration, the hysterical and epileptic seizures are coeval, both developing at the same time: to this form the name of hystero-epilepsy with combined crises has been given. The object of this paper is not to enter into a consideration of the disease as it is met with in general practice, but simply to examine it as a complication of pregnancy, a stand-point from which, fortunately, we are rarely called to view it.

During the early part of March, 1883, I was called to attend a woman said to be in a fit. Arriving at the house, I found, lying on a bed, a young woman, apparently seventeen or eighteen years of age, of fairly-vigorous physique, who was striving against the united efforts of two or three neighbors who sought to prevent her doing herself bodily harm in the violence of her struggles. Examination showed entire loss of consciousness, eyes open and staring, pupils widely dilated, frothing at the mouth, which was then tightly closed, pulse full and bounding. Inquiry elicited that during the day she had been visiting a friend herself the subject of some spasmodic affection, and whilst in her company became greatly exercised on some trivial occurrence, and in this state of excitement returned home, which place she no sooner reached than she was seized with a convulsion. Her husband informed me that she was in the third month of pregnancy, and that prior to this morning she had on one or two occasions attacks somewhat similar, though of less severity. I at once injected hypodermically one-third grain of morphine, which in a short time was followed by a total disappearance of all spasmodic action, a state of stupor supervening, from which in the course of three or four hours she aroused apparently well as ever. On the day following I was called to see her, and found her in a state of high nervous excitement, sobbing, and deploring the presence of some impending danger which she, in her imagination, insisted was threatening her. In a short time the stage of muscular contraction, loss of consciousness, stupor, etc., took the place of the hysterical symptoms, finally terminating, as before, in a return to her normal condition.

Without attempting to follow the case step by step, taking in all its details, and noting the many and peculiar phases through which

it passed, it is interesting to note that prior to September 23, 1883, covering a period of two hundred days, not a day passed without the occurrence of one or more paroxysms. At times the hysterical phenomena would be most marked and usher in the attack; then, again, the epileptic fit would take the precedence, always, however, accompanied by the undeniable imprint of the dual disease hystero-epilepsy. In the inter-paroxysmal period she enjoyed for the most part average good health.

On the morning of September 23 I was asked to see her in an attack of more than usual gravity. When I reached the house, she was profoundly unconscious and had been so for several hours. The time for her approaching labor being near, I made a vaginal examination, but found no evidence of commencing uterine action. I ordered a hot mustard-bath, mustard to the extremities, and bromides the moment she should be able to swallow. In the evening, when I again called, her condition was apparently unchanged. I then ordered a blister to the nape of the neck, and left the patient, to return early in the morning. At 7 A.M. a messenger called, stating that the woman was now perfectly rational and to all appearance in labor. I at once responded, and found that she was having bearing-down pains of moderate intensity at intervals of five or ten minutes, mouth of womb dilating, vertex presenting. I remained by the woman's side until 3.45 P.M., when the child, a healthy female, weighing nine or ten pounds, was born. The labor did not differ from ordinary labors, except that it was only by the utmost vigilance that the woman was prevented falling into one of her accustomed attacks. After the birth of the child, I gave it to the mother, at the same time remarking to her that, as she valued the life of the child, under no circumstances was she to allow herself to have another convulsion. She promised faithful obedience, and up to the present has not shown the first indication of her old trouble. It should be mentioned that during the entire period the patient was under observation she had daily taken large doses of the bromides and other nervines without any effect, save, perhaps, in ameliorating the number and violence of the paroxysms. The case is interesting on account of the rarity of the disease as a complication of pregnancy, its persistence throughout the entire period, its resistance to all remedial measures, and the final disappearance of all symptoms after the termination of labor.

Two queries very naturally present themselves: What was the exciting cause of the attacks? Would the induction of premature labor in this and similar cases be justifiable?

In answer to the first query, I attribute the attacks to an action upon the brain and spinal cord, reflex in its nature and developed or excited by the fœtus in utero.

The happy termination of the case would seemingly offer a negative to the second query; but better judgment will, I think, suggest the wisdom of the operation, and the danger of refusing to employ what, theoretically at least, offers the only chance of relief: at all events, in a similar case I would most certainly have recourse to the operation and expect from it the best results.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 6, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. T. GAILLARD THOMAS read a paper on THE PREVENTION AND TREATMENT OF PUERPERAL SEPTICÆMIA.

The author's reason for preparing a paper on this subject was that since relating briefly the history of a case of puerperal septicæmia treated by intra-uterine injections at one of the societies within a comparatively recent period, he had received many inquiries concerning the mode of treatment, and also because the subject had not been fully elaborated in any single essay, and it was one which, in the light of our present knowledge of antiseptic methods, deserved special consideration. At the annual meeting of the American Gynæcological Society at Baltimore, Dr. Thomas stood alone, with a single exception, in the advocacy of intra-uterine antiseptic injections in puerperal septicæmia. He was one of the first who adopted the method, together with cutaneous refrigeration, in this affection. Dr. Thomas made brief reference to the different views entertained concerning the nature of puerperal fever,—those which considered it a fever due to suppression of the lochia, inflammation of the womb, of the peritoneum, a specific puerperal fever, uterine wounds, arrest of milk-formation, etc. The blood of the puerperal woman is favorable to the development of thrombi and of sepsis, the nervous system is in a state of excessive sensibility, and there are local conditions favoring the development of conditions classed as puerperal fever. The inner surface of the uterus, just after delivery, presents an unhealthy diphtheritic appearance, barring the exudation; there is an irregular, raw, placental site, with small clots covering the uterine sinuses, there is a disagreeable odor, and there are, perhaps, slight lacerations on the cervix, along the vagina, or at the outlet. The secretions along this canal, if inoculated into the finger, would produce irritation and lymphadenitis, but not erysipelas or angioleucitis. Notwithstanding this condition, recovery is almost universal after parturition. But now and then some poison enters through the lesions in the genital canal which act as rapidly and decidedly upon the general system as does a little yeast added to dough, and alarm-

ing phenomena develop, which, if left unchecked, lead to a fatal issue. The physician at his visit in the morning leaves the patient in a favorable condition, with a normal pulse and temperature, but returning a few hours later he finds her complaining of a slight chill, pelvic pain, the lochia have ceased, the milk-secretion is checked, and, as the symptoms proceed, the patient complains of headache, wears an expression of indescribable anxiety, the pulse runs up perhaps to 120, and the temperature to 103° or 104° F. If the physician contents himself with the idea that the patient is simply suffering from milk fever or with malarial symptoms, and does not recognize the fact that poison is being absorbed constantly into the general circulation from some solution of continuity in the genital tract, the active lymphatics will continue to take up the poison, lymphangitis develops, cellulitis, peritonitis perhaps, and all that group of conditions classed as puerperal fever, terminating in death.

As to the pathology of the condition, it is essentially puerperal septicæmia. It may assume the form of a phlebitis, cellulitis, lymphangitis, or a peritonitis, but the disorder is due to the absorption of poison into the circulation of the puerperal woman at some solution of continuity in the tract of the genital canal. As to nomenclature, he disapproved of the term "metria" proposed by the Dublin school of midwifery, considering it more objectionable than the term puerperal fever. Puerperal septicæmia, however, conveys a definite and clear conception of the true nature of the disorder, although in many respects it is far from being a satisfactory designation. As to the exact nature of the poison, German pathologists have tried to ascribe it to the round-formed micrococci, but in such a paper as the present one the recent view of the nature of certain diseases as dependent upon bacteria could not, for evident reasons, be considered. But, admitting that some toxic agent may be the cause of the affection, we should inquire as to what are the best methods for preventing its entrance into the system, and, should it once gain entrance, study to know the best methods for counteracting its influence or destroying its activity.

There are two methods by which the poison could gain entrance to the genital tract,—namely, by the air, and by direct contact through the clothing of the hands of the surgeon or nurse, the sponges, instruments, etc. The author then directed his remarks specially to private practice, where, even in the wealthiest families, there is a carelessness shown which amounts almost to criminality. The greatest of care should be taken in every case of midwifery to guard against the entrance of septic poison into the circulation.

He enumerated the following prophylactic

measures which it seemed to him should be adopted in every case of midwifery, whether in hospital or private practice.

1. The room in which the confinement is to take place should have the floor and the walls thoroughly washed with a solution of carbolic acid or of the bichloride of mercury. All cloths and towels should be washed in the same solution, and all curtains and drapery should be dispensed with.

2. The nurse and the physician should take care that all clothing, both under and outer, is free from any effluvia of septic affections, as of typhus, scarlet fever, erysipelas, and the like, and, if so exposed, they should change every article of clothing, and bathe the entire body, especially the hair and beard, with an antiseptic solution, as of boracic acid.

3. As labor comes on, the nurse should thoroughly wash her hands and cleanse the nails with a stiff brush. She should give a vaginal injection of an antiseptic solution every four hours during labor, and keep a cloth wrung out of the same solution over the vulva.

4. Both the physician and the nurse, before approaching the genital organs of the woman, should thoroughly wash the hands and nails with soap and water and soak the hands in a bichloride solution (one to one thousand).

5. The first two stages accomplished, the third stage should be efficiently produced. All portions of placenta and membranes should be removed, and ergot administered in moderate doses three times a day, and kept up for a week, in order to secure complete expulsion of clots and closure of the uterine sinuses.

6. The doctor should satisfy himself, without taking the word of the nurse, at the conclusion of labor, as to the exact condition of the genital tract, and, if he find a laceration of the perineum, close it by suture; and if slight solutions of continuity be found on the vulva and vagina, they should be dried with a cloth and touched with equal parts of persulphate of iron and a saturated solution of carbolic acid, again dried thoroughly with a cloth, and painted over with gutta-percha collodion. In this way absorption would be prevented for three or four days, when the application could readily be repeated.

7. Six or eight hours after labor, the patient having become rested, the vagina should be syringed out with an antiseptic solution, and a suppository of cacao-butter, containing from three to five grains of iodoform, be introduced.

8. The vaginal injections and suppositories should, in all cases of normal labor, be repeated every eight hours, and, in cases of difficult or instrumental labor, twice as often, and should be kept up at least ten days; the nurse observing the precaution already mentioned,—to wash the hands in a disinfectant solution before every approach to the genital tract of the patient.

9. When the use of a catheter becomes necessary, the physician should employ a gum-elastic catheter, which should, before use, be thoroughly immersed in the antiseptic solution. The nurse should not be allowed to employ an old silver catheter which she has probably carried about for several years.

10. Last, but by no means least, let the physician inform himself, by personal observation, as to the competency of the nurse to syringe out the vagina thoroughly and to place the antiseptic suppositories just where they should be placed, and to use the catheter without injury to the patient. By neglecting these precautions there might be failure to wash out the upper segment of the vagina while the lower was thoroughly washed. The trouble involved in this plan would not be at all great, when measured with the comfort given the mind of the physician from a feeling that he had done his whole duty. Every woman in confinement ought to be treated as though she were going through a capital operation, and, if the rules laid down were conscientiously observed, many households would probably be saved the sorrow of losing their female heads.

With regard to the use of intra-uterine injections as a prophylactic resource, Dr. Thomas said that it could not be approved of, except in very severe operations within the uterine cavity, which render the occurrence of septicæmia almost certain. As a preventive measure to be uniformly adopted, he looked upon it as in the highest degree rash and reprehensible.

Supposing that the poison has entered the system, what are the best means now known for stopping the septic process?

First. As soon as a diagnosis of septicæmia is determined upon, all pain and nervous perturbation should be checked, and mental anxiety should be quieted by the hypodermic administration of Magendie's solution of morphine, unless some special idiosyncrasy against opium exist; and during the entire attack, whenever suffering of body or mind occurs, it should be repeated; perhaps once in six or eight hours would prove sufficiently often. No other method can compare with the hypodermic in these cases. If a sharp and new needle be used, and thoroughly cleansed with soap and water and dipped in the bichloride solution each time of use, no abscesses will occur.

2. The patient having been entirely relieved of pain, the nurse should quietly, without any hurry, noise, or disturbance, spread an oil-cloth over the edge of the bed, made to fall into a tub of warm water rendered antiseptic by a two or two-and-a-half per cent. solution of carbolic acid, or the bichloride solution, one to two thousand. Then a Chamberlain's glass tube, the perforations confined principally to the end, or Lyman's tube, should be fitted to a Davidson's syringe,

immersed in the tub of water, the tube conducted carefully through the vulva up to the fundus of the uterus, with the index finger as a guide, and a stream of water be made to flow against the uterine wall, washing away the blood-clots or other foreign material that may be present. In some cases, in which there was reason to suspect the presence of portions of membranes, the patient had been chloroformed, and the hand passed carefully into the uterus and the walls very gently curetted by the nails. In some cases, the walls might be rubbed down with a sponge.

The dangers of the method are, first, the introduction of air into the uterine sinuses; secondly, the production of hemorrhage by detaching thrombi, which fill the mouths of the uterine sinuses; thirdly, the forcing of some of the fluid directly into the circulation; fourthly, the production of grave convulsions by the sudden and powerful influence upon the nervous system; and, fifthly, the passage of fluid through the Fallopian tubes. But all these dangers may be avoided by care as to details, and the use of a large tube, and of water of not less than 100° F. The tube should not quite fill the os internum or externum and exclude the exit of the water. If necessary, dilate by the finger or Barnes's dilator. Have a solution of persulphate of iron always at hand, in case of sudden hemorrhage; and he further advised, in case hemorrhage should occur, to give ergot, make pressure so as to cause contraction of the uterus, etc.

The frequency of the intra-uterine injections will vary greatly in different cases. In a mild case, in which the temperature readily comes down, it might be necessary to use the injection only once every five hours, in other cases every three hours, and in bad cases every hour. The injections should always be administered by the physician, and always be carried fully up to the fundus of the uterus. Many prefer the use of a syringe which carries a steady stream by gravitation, as the so-called fountain-syringe, and such, formerly, was the author's preference; but he had since learned that, with care, the stream can be projected with gentle force without danger, and more effectually bring away any clots and material that may be present in the cavity of the uterus. Some prefer continuous irrigation, but he looks upon it as a delusion and a snare. For vaginal irrigation, however, it is an excellent method. Nevertheless, in very severe cases, he prefers the continuous flow with the intermittent current, used every three hours, rather than to subject the patient to the use of the intermittent current as often as it would otherwise seem necessary.

3. The uterus having been thoroughly cleansed, and the patient entirely quieted, attention should be turned towards controlling the temperature. Formerly he had relied on

cold or tepid water, the patient lying on Kibbie's cot; but at present he accomplishes the same result more easily and pleasantly by the use of Townsend's rubber-tube coil, which covers the whole of the abdomen from the ensiform cartilage to the symphysis pubis, through which a stream of cold water passes by means of siphon-pressure, the vessel of supply being about three feet above the level of the patient, and the receiving-vessel being upon the floor. By this means a temperature of 104° could be brought down and kept at 100° F. without difficulty. In his service at the Women's Hospital the rubber coil is as commonly in use in cases of laparotomy as gargles are in sore throat. Sometimes the temperature would not go down inside of twenty-four hours. He had never seen any evil result from the use of the coil.

4. The nervous system should be placed under the influence of febrifuge medicines, as of quinine, or capsules of Warburg's tincture as recommended by Dr. Metcalfe, or salicylate of soda.

5. The patient should receive fluid food frequently repeated, milk being the staple article, and animal broths for a change.

6. The attendant should surround himself with abundant and efficient assistance. The physician should associate with himself some young practitioner who can use the douche safely and efficiently, and there should be at least two nurses, the one to relieve the other.

The antiseptics which had been employed were thymol, boracic acid, salicylic acid, carbolic acid, and mercurial bichloride. Of these all others had disappeared under the superior excellence of the last two, and carbolic acid appeared to be about to be abolished for the bichloride in the strength of one part to one or two thousand. If carbolic acid be used, it is not safe to carry the strength beyond two or two and a half per cent.

DISCUSSION.

Dr. W. M. POLK, having been requested to open the discussion, said that he believed that he uttered the thought of every member of the Academy when he said that they were deeply indebted to Dr. Thomas for the able and even eloquent presentation of this most important subject. The author had gone into the subject so thoroughly that there seemed but little left to say, especially with reference to treatment. He thought that perhaps it would have been better, in view of the stress which Dr. Thomas had placed upon antiseptic treatment, which most would of course accept, had he placed himself more squarely upon that pathological view which regards puerperal fever as identical with septicæmia and pyæmia. So long as there is any question on this point will there be doubt in the minds of many with regard to the propriety of many measures advocated by Dr. Thomas. Dr.

Polk regarded the disease, as the question at present stood, as identical with septicæmia and pyæmia. The difference in the symptoms was merely that that belonged to the peculiar tissue involved and peculiar condition of the circulatory fluids. As to treatment, standing as he did upon this basis of septicæmia and pyæmia, it seemed to him that the principles of Listerism, as laid down by Mr. Lister and his followers, and so ably advocated by Dr. Thomas to-night, entirely covered the ground. As to precautionary measures, there was absolutely nothing to add, unless it were that attention should be paid to the purity of the atmosphere, especially in this city. Regarding active treatment, he would simply say that oftentimes, in his experience, he found himself making use of intra-uterine injections when in reality the sole lesion which was killing the patient was to be found in the cervix. This was found in a sloughing condition, and the weight of the fluid failed to separate the lips properly and effect cleansing. He therefore now makes a careful examination of the vaginal canal, introduces the Sims speculum, draws down the cervix with the tenaculum, and, if he finds any lesion, applies directly to the spot a strong solution of carbolic acid or other disinfectant; in many cases this is the only treatment which seems necessary. He had sometimes introduced Skene's blunt curette and removed, with great gentleness, any remaining membranes from the uterine cavity.

Dr. J. B. HUNTER had experienced the difficulties of making intra-uterine injections, and thought it should never be intrusted to a nurse. It should be done with the greatest gentleness and with the least disturbance to the patient, and he believes it unnecessary to lift the patient to the edge of the bed at all, but to use a large bed-pan and make the injections while she lies on the back. The Chamberlain tube is usually too large, especially after the first few injections, as the cervix then contracts more or less. The perforations should not extend down upon the instrument, else all the fluid may escape into the lower portion of the canal. There is apt to be more objection against the proposed methods on the part of friends and the nurses than on the part of the patient. He uses water of a temperature of 110° F. The bodily temperature should be a guide as to the frequency of the injections. He did not approve of the coil in cases of puerperal fever, for the temperature might thus be reduced while septic material was still being absorbed, and thus mislead the physician. The coil, however, is a most excellent instrument in peritonitis after laparotomy.

Dr. E. L. PARTRIDGE thought that there could not be much difference of opinion in the minds of those who had seen much obstetric practice concerning the pathology of the condition. He would lay special impor-

tance upon personal cleanliness on the part of the physician and nurse, as prophylactic measures. As to the management of puerperal septicæmia, he made use of intra-uterine injections with the same frequency recommended by Dr. Thomas and others. With reference to agents employed, he would only speak of a supplementary measure to the intra-uterine injection introduced by the late Dr. Livingston at the Nursery and Child's Hospital; that is, the injection of a mixture of iodoform and glycerin after the douche.

This measure seemed to render the necessity for the douche less frequent. He recognized the value of the bichloride solution, and also that of the coil in cases of puerperal septicæmia, for the purpose of reducing temperature. Its first application had produced no greater discomfort than the first rectal injection.

THE PRESIDENT said that, on account of the lateness of the hour, it would be impossible for all the gentlemen prominent in this specialty to take part in the discussion, and, as the opinion of all should, as far as possible, be obtained, he would suggest that the first meeting in February be appointed as the time for the special consideration of the subject of the paper, and he would beg to be allowed to open the discussion on that occasion. Some years ago he had given expression to views on this subject which were not in accord with those of any of the gentlemen present on that occasion, but which, he believed, were the views entertained by many prominent gentlemen throughout the world at the present day. He should agree with the author of the paper as to the description given of puerperal fever, but as to the sum total of the conditions which went to make up the pathology he should differ, and also with reference to certain matters in treatment.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 12, 1883, GEORGE F. SHRADY, M.D., President, in the chair.

ANOMALIES IN THE DEVELOPMENT OF THE LIVER.

Dr. FERGUSON presented some specimens of anomalous development of the liver, the most important form, probably, being that in which the right lobe attained an unusual size, reaching down to the crest of the ilium, club-shaped, and constituting an apparent abnormal tumor, liable to mislead the diagnostician. Moreover, it might cause difficulty by pressure upon the colon and ureter, interfering with the function of these organs. The left lobe was likely to be small in size.

The second in importance was that form of anomaly in which the left lobe was largely increased in size, while the right was likely to

be diminished. This form also was liable to mislead the diagnostician, who might suppose that he had to deal with a new growth.

The next form was that in which but one lobe of the liver was present. Dr. Ferguson had seen but a single specimen of this description. In it the liver was almost a complete hemisphere.

The next form was that in which the liver was composed of one large lobe with a few—perhaps four—small nodules on its under-surface.

Still another form of anomaly was that in which the liver, consisting of one large lobe, was cut up by a large number of grooves, as it were, constituting numerous small nodules. One of the specimens presented probably contained as many as thirty-five or forty of these small nodules. It was to be remarked that the specimens mentioned were normal, or nearly normal, in structure, and that the anomalous form was not due to disease.

Dr. Ferguson also presented specimens removed from a patient with the following history. The patient, houseworker, was 22 years of age, married, who entered the hospital on the 27th of November, 1883. A few hours previous to admission she had been suddenly seized with acute pain in the chest, dyspnœa, and vomiting. She had for some time before been in a hospital and treated for dropsy. On admission, the face was cyanosed, there was severe pain in the chest, there was a loud blowing murmur over the base of the heart, dyspnœa, rapid respiration. The urine contained albumen. The temperature was not at any time very high. Death took place inside of twenty-four hours. Autopsy showed œdema of the legs below the knees, twelve ounces of serum in the peritoneum, no evidence of peritonitis, a few ounces of fluid in the pleural sac, extensive vegetations on the mitral valve, dilatation of the corresponding ventricle and auricle, lungs intensely œdematous and congested, fatty degeneration of the liver; enlarged, congested, and pigmented spleen; left kidney slightly larger than normal, the right much atrophied; the ovaries displaced and fixed by adhesions; the Fallopian tubes contained purulent fluid, the right about two ounces and the left a smaller quantity. Microscopical examination showed ciliated and columnar epithelium, pathological properties which Dr. Ferguson had never witnessed in any other form of abdominal cyst.

Dr. GARRISH asked Dr. Ferguson if, out of the thousand autopsies which he had made, he had found any case of cirrhosis of the liver in which there was absence of an alcoholic history.

Dr. FERGUSON said that the question was a very difficult one to answer, for the reason that it was almost impossible to get a straight history regarding alcoholic beverages; he thought, however, that he had seen at least

two or three cases of cirrhosis of the liver in which there was positively no alcoholic history.

Dr. CARPENTER remarked that it was an accepted fact that cirrhosis of the liver might occur aside from alcohol as a cause.

DERMOID CYST DISCHARGING INTO THE PELVIS OF THE KIDNEY.

Dr. CHARLES HEITZMAN presented a specimen of urine, which was brought to him about a year ago by a physician in the central part of the State, who stated that the woman who passed it was about 50 years of age, and was in the habit of passing urine containing a large amount of whitish threads, every two to four weeks, under excruciating pain. The specimen brought to Dr. Heitzman had a glassy, shining appearance, contained floc-cules, and, under the microscope, showed the characteristic properties of a dermoid cyst,—horny, dry epithelial substance, and crystals of urate of soda in sheath-form. Dr. Heitzman diagnosed a dermoid cyst which at certain periods discharged its contents into the pelvis of the kidney, and advised an operation. He heard nothing more of the case until recently, when the physician wrote him that the patient had continued to pass urine of a similar appearance under similar conditions about once in two or three weeks; that she was otherwise in good health, excepting laryngitis.

REMOVAL OF ENLARGED THYROID GLAND BY ELASTIC LIGATURE.

Dr. J. A. WYETH presented a part of the isthmus of an enlarged thyroid gland which had been successfully removed by the elastic ligature after failure, resulting in hemorrhage, with the ordinary ligature.

ANGIOMA OF THE VOCAL CORD.

Dr. LOUIS ELSBERG presented the specimen, which had recently been removed from a man, 28 years of age, a vocal teacher, formerly a lecturer. The tumor was situated on the right vocal band, near the anterior commissure, and, in the mirror, appeared the size of a large pea. Under the microscope it presented the characteristics of an angiomatous tumor. Such tumors were frequently met with in the skin, but this was about the tenth occurring in the larynx which had been recorded in literature. He himself had presented another to the Society about three years ago. They usually occurred on the right vocal band.

PUERPERAL TETANUS.—A case of fatal puerperal tetanus, occurring at the Lying-In Hospital in Prague, is reported in the *Sz. Louis Courier of Medicine* for December. The tetanus began a week after delivery, and terminated in death five days later. The autopsy showed metritis and pachymeningitis spinalis et cerebri.

GLEANINGS FROM EXCHANGES.

PHARMACY, THERAPEUTICS, AND COLLECTIVE INVESTIGATION OF DISEASE.—At a recent meeting of the Alumni Association of the Philadelphia College of Pharmacy, F. E. Stewart, M.D., Ph. G., read an essay entitled "The Relation of Pharmacy to Therapeutics," in which the interests of the physician and the pharmacist were both shown to be opposed by the proprietary-medicine trade; and it was claimed that the true interests of science demanded the discontinuance of the use of secret remedies by the public. Both pharmacy and therapeutics would be gainers by such a course. In conclusion, the lecturer advocated, for the advancement of science, a collective investigation of the materia medica of the world by the United States government, by founding at Washington a government laboratory provided with sufficient men, apparatus, and means for doing scientific work on drugs. Each department of the knowledge of drugs should be represented. There should be departments of botany, agriculture, history, chemistry, microscopy, toxicology, pharmacy, physiology, and therapeutics: a department of botany, to identify and properly classify medicinal plants; of agriculture, to study their cultivation; of history, to compare them with each other with regard to their relative importance as remedial agents; of chemistry, to investigate their active principles, and to learn the best methods for their extraction; of microscopy, to determine their structure, and for the purpose of identifying drugs and preventing their adulteration and substitution; of toxicology, to investigate their properties as poisons, and to ascertain their antidotes; of pharmacy, to prepare them aright; of physiology, to determine their actions on animals for the purpose of studying physiological therapeutics; and of therapeutics, to send them out for clinical test in the hands of the profession, guided by the knowledge already collected by the laboratory.

This work should include both old and new drugs. Our knowledge concerning some of the oldest drugs in the materia medica is but limited, and much of the information that exists in the text-books is trashy as far as therapeutics is concerned. It needs a thorough sifting and revision, after careful experiment is made to prove what is true, and to separate the wheat from the chaff.

When a new drug is discovered that seems to bid fair to be of value as a therapeutic agent, let it first be tested physiologically on animals, and, if it prove to possess activity, let it be submitted to chemical analysis. Then let it be prepared in the best form for administration, and sent to the hospital service of the country, and to the medical profession at large, so that its virtues may be tested clinically. That the medical profession may be

well informed with regard to the drug, so that they can make such tests in an intelligent manner, let "working bulletins" be prepared, giving, briefly, the state of existing knowledge concerning the drug after it leaves the investigation of the laboratory. Accompany the bulletin with a list of questions stating what it is desirable to ascertain about the drug, requesting answers from the profession. When sufficient information is thus obtained to justify its compilation, let it be collected and classified in the forms of science, and published for the benefit of science. Thus would be founded a scientific pharmacological literature, progress in the knowledge of drugs would be promoted, the position of both professions improved, and the cause of suffering humanity greatly benefited.

"There is at Washington an institution known as the Smithsonian Institution. Its founding is due to that great lover of science, James Smithson. Its object is the increase and diffusion of knowledge among men. This institution is devoted to scientific work. It is well provided with money, elegant buildings, a fine library, an excellent laboratory, and a corps of scientific men. The work of the United States Fish Commission, National Museum, and scientific research in other departments of science are too well known for comment here. It is suggested that there be added to this institution a laboratory of experimental pharmacology for the purpose described.

"To sum up, therefore, pharmacy and therapeutics are but branches of the science of drugs, and dependent upon the materia medica. The science of drugs is properly called pharmacology. Pharmacology is a department of the science of medicine. The pharmacist and physician are both votaries of medical science, though interested in different branches. To prepare medicine aright, pharmacy must conform to therapeutic usage, and the physician is dependent upon the pharmacist for such preparation. In the study of the materia medica both professions meet, and in favoring the progress of pharmacology their interests are mutual."

After discussing this paper, it was voted that it is the sense of the meeting that this suggestion be adopted, and the founding of such a laboratory at Washington in connection with the Smithsonian be recommended.

ST. JOHN LONG'S LINIMENT.—This old-time liniment is still in use at the Pennsylvania Hospital, in this city, for stiff and rheumatic joints, and in general for cases in which a local stimulant and rubefacient effect is desired. Mr. Jacob Hecker, Ph.G., the apothecary of the institution, uses the following formula:

R Vitelli ovi, no. viij;
Olei terebinthinæ, f̄xxiv;
Acidi acetic, f̄xxvj;
Aquæ, f̄xxiv. M.

The directions for its preparation are as follows. To the yolks, in a gallon-bottle, add a small quantity of the water, and shake briskly together; then add the turpentine in successive portions, shaking the mixture briskly after each addition; then add the acetic acid, and lastly the water, in the same manner. For private practice the liniment is greatly improved by the addition of one drachm of good oil of lemon to each pint.

MISCELLANY.

A PHILADELPHIA NEUROLOGICAL ASSOCIATION.—A preliminary meeting of physicians interested in the study of nervous diseases and psychiatry was held at the hall of the College of Physicians on Saturday evening, the 15th instant, at which Dr. Kerlin presided. It was well attended, and much interest was shown by those present. A series of resolutions was adopted, declaring the intention of those present to meet early next month for the permanent organization of a society for the study of neurological science in all its departments, consisting of physicians of Philadelphia and vicinity. Drs. Charles K. Mills, Wharton Sinkler, R. H. Chase, J. T. Eskridge, and A. P. Brubaker were appointed a committee on Permanent Organization, the society to meet at the call of the chairman of this committee, for organization.

The following were present at the meeting: Drs. C. K. Mills, Wharton Sinkler, Francis Dercum, J. T. Eskridge, James Hendrie Lloyd, Nathan A. Randolph, Edward T. Reichert, A. P. Brubaker, Lambert Ott, Max Bochrach, Lewis Brinton, William M. Angney, S. Preston Jones, D. D. Richardson, Emily P. Avery, J. N. Kerlin, Robert A. Given, R. H. Chase, Alice Bennett, and George Moorehouse.

Those present indicated their intention of co-operating in the movement, and letters of approbation were received from other neurologists and alienists who could not be present.

DEATH FROM PHOSPHORUS-POISONING.—The death of a girl, aged 2½ years, is reported from Lenzie, Scotland, and everything points to its being a case of poisoning from sucking the phosphorus off matches. Some days previously she had been playing with a box of matches, and it was observed that the phosphorus had been sucked off several of them. Symptoms of poisoning showed themselves a few days afterwards, and she died in considerable suffering, after a short illness.—*British Medical Journal*.

IODOFORM AND CALOMEL.—As this combination is often ordered by specialists as a dusting-powder, it may be of interest to know that the ingredients are, to a certain extent, incompatible. S. J. Bendiner, in a communication read before the New York College of

Pharmacy, recently, stated that iodoform and calomel are decomposed by light at an ordinary temperature, such decomposition taking place as well by exclusion of the chemical rays. Consequently, these substances rubbed together can only be safely dispensed in black glass bottles.—*Druggist and Chemist.*

DR. WILLIAM THOMSON has changed his residence from No. 1502 Locust Street to No. 1426 Walnut Street, Philadelphia.

NOTES AND QUERIES.

THOMAS STORY KIRKBRIDE, M.D.

A severe attack of pneumonia, which Dr. Kirkbride suffered last March, produced a condition of debility which finally led to his death on December 17, at the hospital to which he had devoted the best powers of his life, and which remains an enduring monument to his faithfulness and skill.

Thomas Story Kirkbride was a native of Pennsylvania; he was born near Mooresville, Bucks county, July 31, 1809. His ancestors were members of the Society of Friends, and were among the early settlers of the State. His academical education was acquired at Trenton and Burlington; his medical studies were inaugurated under the direction of Dr. N. Belleville, of Trenton, and continued at the University of Pennsylvania, where he received his degree in March, 1832. After a year's service as interne in the Friends' Asylum for the Insane at Frankford, he entered the hospital with which his whole future was to be identified, in March, 1833, as resident physician. At this time all of the departments were located at Eighth and Spruce Streets, Philadelphia. Having served a term of two years, he engaged in private practice for the next five years, during which period he also served for a time as physician to the House of Refuge, to the Institution for the Blind, to the Magdalen Asylum, and other public institutions. At this time, the managers of the Pennsylvania Hospital having secured a large piece of ground on Haverford Road, west of Forty-Second Street, in West Philadelphia, and having erected upon it a special building for the accommodation of insane persons, Dr. Kirkbride was tendered the position of superintendent, which he accepted. The new hospital was opened January 1, 1841, and the new superintendent at once entered upon the duties which ceased only with his death.

Under Dr. Kirkbride's able and attentive administration the new hospital became so popular and he became so identified with its success that for many years it was better known to the public by his name than by its proper title. In 1854 he urged upon the Board of Managers the necessity of increased accommodations, and recommended the erection of an additional building, which would permit entire separation of the sexes. His carefully-prepared plans for the new building were adopted, and the entire amount (over \$355,000) required for its erection and furnishing was obtained by private contributions. The new building, which is now known as the female department, had an equal capacity with the former one,—of two hundred and fifty patients. Since October 27, 1859, when this department was formally opened for the reception of patients, Dr. Kirkbride has continued to reside in it with his family.

The reputation of Dr. Kirkbride rests chiefly upon his ability as an executive officer, and upon his humane methods of treating cases of mental disease. Under his able direction the Insane Department of the Pennsylvania Hospital has obtained a celebrity that may justly be said to be limited only by the bounds of civilization. His contributions to literature were chiefly in connection with subjects of hospital construction and administration. In addition to his valuable series of annual reports to the Board of Managers for the last forty-one years, he published a work on "The Construction, Organization, and General Arrangement of Hospitals for the Insane," and a number of minor monographs, among which are "Rules and Regulations for Hospitals for the Insane," and "Rules for the Government of those Employed in the Care of the Insane," besides some contributions to current medical literature.

One of the originators of the Association of Medical Superintendents of American Institutions for the Insane, he served the organization for nine years as its president, thus showing the high esteem in which he was held by his colleagues. He was an honorary member of the Psychological Association of England, a Fellow of the Philadelphia College of Physicians, and he also belonged to several other medical and

scientific organizations, including the American Philosophical Society. He was a manager of the Institution for the Blind in this city from the time of its foundation.

Dr. Kirkbride was a true gentleman; modest, courteous, refined by nature, the secret of his successful career was one of patient continuance in well-doing, his genius that of accomplishment. He probably never had robust health, but, in reviewing his work, it looks titanic in comparison with his weak physical frame. The world may, or may not, know its greatest men; but it certainly requires more than usual discrimination to appreciate those elements of character which are the foundation of true greatness.

WILLIAM H. HOOPER, M.D.

Dr. William H. Hooper died, December 18, at his home in this city, from a complication of diseases. He had suffered during the yellow fever at its last visitation here, and during the last few years of his life was a sufferer from severe hepatic disorder. Born in Worcester County, Maryland, August 7, 1824, he came to Philadelphia before his twelfth year, and obtained his academical education at the University of Pennsylvania, where he received his degree of A.M. in 1845, and subsequently he was graduated in the Medical Department in March, 1848. With the exception of eighteen months' study in Paris hospitals, he devoted himself to private practice and with marked success. He was a member of the Philadelphia College of Physicians and other Societies. He received the nomination for coroner on the Democratic ticket last September, but failed of election; this disappointment probably hastened his death.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 8 TO DECEMBER 22, 1883.

CAMPBELL, JOHN, LIEUTENANT-COLONEL AND SURGEON.—

Having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Kentucky, to New York City, and assume the duties of attending surgeon in that city. Paragraph 12, S. O. 284, December 12, 1883.

CLEMENTS, BENNETT A., MAJOR AND SURGEON.—Relieved from duty as attending surgeon New York City, and detailed as member of Army Medical Examining Board, now in session in New York City. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

McKEE, J. C., MAJOR AND SURGEON.—Assigned to duty as Medical Director Department of the Columbia. G. O. 31, Department of the Columbia, December 3, 1883.

SHUFELDT, ROBERT W., CAPTAIN AND ASSISTANT-SURGEON.

—Now on sick-leave, relieved from duty in the Department of the East, and assigned to temporary duty in the office of the Surgeon-General of the Army. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

WILLIAMS, JOHN W., MAJOR AND SURGEON.—Leave of absence on surgeon's certificate of disability granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. Paragraph 6, S. O. 286, A. G. O., December 14, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM DECEMBER 8 TO DECEMBER 22, 1883.

Assistant Surgeon L. W. CURTIS detached from the "Adams," and ordered to the coast-survey steamer "McArthur."

P. A. Surgeon F. C. DALE detached from the coast-survey steamer "McArthur," and ordered to the U.S. steamship "Adams," at Sitka, Alaska.

Surgeon F. M. DEARBORNE placed on the retired list from December 10.

P. A. Surgeon A. C. HEFFINGER, in addition to his duties at the Navy-Yard, ordered to attend officers at Portsmouth, New Hampshire.

P. A. Surgeon C. T. HIBBETT detached from the "Onward," and ordered home.

Surgeon J. W. ROSS detached from the U.S. steamship "Iroquois," and ordered to the U.S. steamship "Onward," at Callao, Peru.

PHILADELPHIA, JANUARY 12, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE ON URETHRAL STRICTURE.

BY FESSENDEN N. OTIS, M.D.,

Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York.

GENTLEMEN,—You will remember that two weeks ago to-day an operation was performed on two individuals at this clinic, for the relief of urethral stricture. In one of those cases there had been recurring cystitis for a long period, and apparently without provocation, coming on without the patient being conscious of having indulged in any excess, of having taken cold, or anything that could be discovered as an imprudence. It was suspected that there might be some cause within the bladder, and the patient was repeatedly examined, but without result. He was suspected of having stricture, but there was a difference of opinion on that point. Several surgeons believed there was no stricture, while at least one, after examination, claimed that there was more or less stricture, causing the repeated attacks of cystitis, and advised the patient to come here and have the matter settled and attended to if possible. He came on from Michigan the week before last, and was then presented to you with his history.

The circumference of the penis in this case was about three inches and five-eighths. Examination was made before you, and, with the aid of the urethrometer and bulbous sound, two strictures were demonstrated, one contracting the canal at between two and a half and three inches fully eight millimetres, and the other, at the anterior portion of the canal, of ten millimetres, commencing at the orifice and extending about a half-inch. Division of the anterior stricture was made with a straight blunt bistoury, and the deeper one with the dilating urethrotome, both up to thirty-six mm., and a No. 36 sound was passed into the bladder. The results of the operation have been in every way favorable in this case. There has been no hemorrhage, and no complication of any kind. An instrument has been introduced every two or three days since that time, and certain beneficial results

are already recognizable. Dr. Blake White, one of our clinical assistants, has had charge of the after-treatment. I have not seen the case since the day it was operated upon until this morning, and I have not had opportunity of making inquiries as to what changes have been effected. I would say, however, that in cases of recurring cystitis from stricture, and particularly from strictures of large calibre, the relief is sometimes immediate. But, again, it may be quite slow. Certainly, if this be the cause of the cystitis,—and it has been proved that cystitis may result from stricture,—relief follows the removal of the stricture, sooner or later. A case in point is that of a gentleman under my care several years since, who suffered from gleet. He was about sixty years of age, and came to me repeatedly with his gleet. I referred his trouble finally to stricture, which was found of large calibre, at three and a half inches from the orifice. The normal size of the canal was 34 or 35, and at this point there was a contraction of about three or four millimetres. I regarded this as the probable cause of his trouble, but he declined any operative measures. He was under my care a long while for recurring gleet, and at last he began to have some signs of irritation at the neck of the bladder. I then again stated to him that I thought it very important that he should have this stricture relieved, as I believed it was the cause of the gleet and of the irritation at the neck of the bladder. He declined the proposed operative measures with some warmth, and desired to be treated for his trouble in the ordinary way. He did not desire to have his urethra cut. He thought that ordinary means should be sufficient. Within a few days he came back, however, with an increase of the irritation, which finally resulted in a cystitis. He was put to bed, and, in spite of everything that could be done for him, he lay for at least a couple of months, being several times in great danger of losing his life from the acuteness of the cystitis, which extended evidently up the ureters and affected the kidneys to a greater or less extent. There was at one time some evidence of uræmic trouble. It seemed, however, that it was sympathetic, and not the consequence of pyelitis, as the subsequent history proved.

The patient, under the usual remedies

for acute cystitis, began to improve, and, from passing water every few minutes, he gradually passed it less and less frequently until he had an interval of from three to four hours, finally making a recovery. After having been apparently well for several weeks, he returned with an increased frequency of urination. Again stating to him that the probabilities were that this stricture was the cause of the return of his trouble, he became very anxious to know whether that stricture was really the cause of the suffering from which he came so near losing his life. When I replied in the affirmative, he became very indignant to think that he had not been forced to have the operation done. He said, "Doctor, you should have taken me by the throat, and held me down, and operated upon me!" All very well. But suppose I had done so, and the operation had not turned out so well? We are not accustomed to treat our patients in that way. We have to rely upon their consent; we have to reason with them, and if they are not capable of appreciating our reasoning they have to take the consequences. He said, "I want the operation immediately." I replied, "No. Here you are in the face of another cystitis, and I do not feel justified in operating upon you without a consultation with some authority, so that somebody shall help to bear the responsibility in case this cystitis should go on in spite of the operation and your trouble become worse than it was before. It then might be attributed to the operation." In this case I called in Dr. Markoe, and after a careful consideration of the difficulties of the case, although there was evident advancing cystitis, it was concluded to add a traumatism to this condition; that is, to make an incision into the urethra, which, under the circumstances, might have been considered by some surgeons well calculated to aggravate the trouble. The operation was done on the same day that the consultation was held, and, from passing his water every hour or two, immediately following the operation the intervals were increased to four or more hours. The patient had, practically, no further trouble, and within a week was about again, and from that day to this, now more than five years, he has had no more cystitis; not even any re-contraction of the stricture, as proved by a recent re-examination.

Now, that was a case in which there was immediate, positive beneficial result, and I have seen not only one such case, but several. It was for reasons deduced from cases like this that, when this patient came to us with recurring cystitis, it immediately occurred to me to examine the urethra to see if the same cause had not been the origin of the same trouble. The operation was done, and the immediate result the patient will now tell us. He says that he does not think that he had to urinate so often immediately after the operation. Since then, a day or two will pass with scarcely any irritation, and he will not have to pass water for three or four hours. On other days he has to pass water more frequently, but at no time so frequently as previous to the operation.

It would seem, therefore, that there has been some immediate beneficial effect produced. Sufficient time has not passed to enable us to pronounce upon the results so far as the cure of the cystitis is concerned. We will now show you the condition of the urethra after the operation of division." At the original examination the circumference of the penis was found to be three and five-eighths inches, which would—accepting the proportionate relation between the circumference of the penis and that of the urethra, which I have often referred to—call for an instrument of 35 or 36; and, although we were able before to pass a No. 36, I should be perfectly satisfied to pass a No. 35 to-day, as some slight swelling of mucous membrane usually remains for some weeks after the operation of dilating urethrotomy. This instrument, you will observe, passes without any effort on my part to force it down. Now, what we set about in this case was to remove the stricture. That was the immediate object of the operation. Consequently, by so far we have done exactly what we intended to do. We have relieved the stricture, as demonstrated by the passage of the instrument, thirty-five millimetres in circumference, two weeks afterwards, and without any signs of sensitiveness on the part of the patient. The removal of the strictures has been accomplished without any accident occurring since the operation. There has been no hemorrhage. Hemorrhage is one of the accidents that we look for as quite likely to follow the operation immediately.

I had not time last week to say anything

to you about the subject of hemorrhage. It is important for you to understand that, in these cases, we cut into vascular structures deliberately, and with the purpose of dividing them, and we thereby put them in a condition to bleed, and consequently we should always be prepared to arrest any resulting hemorrhage. It is a very curious fact, which will be observed by those of you who shall have much to do with these operations, that in a very considerable proportion of them there is no bleeding that can be called a hemorrhage at all; that but a few drops of blood, perhaps a few drachms, may be lost at the time of the operation, and then scarcely more than a few drops at each introduction of the sound, until entire healing takes place. Now, this is so common a fact, that in a report of nineteen cases by Dr. Tilden and Dr. Watson, surgeons to the Boston Dispensary, and published lately in the *Boston Medical and Surgical Journal*, there was not a single instance of hemorrhage. I was exceedingly sorry—as I wrote Dr. Watson, in congratulating him on the completeness of the report and the success attending the operations—that no such accident had occurred, because one not familiar with the possibilities under such circumstances might infer from a series of nineteen cases without hemorrhage that hemorrhage was not likely to occur, whereas the probabilities would be that in the first case which came to the novice he would have a profuse hemorrhage. That is the usual luck of doctors who are beginning, as a rule. They often get into trouble that men who are familiar with the operation have not seen, perhaps, for a very long time.

It has occurred to me repeatedly to be called in consultation for this trouble in just such cases. Why hemorrhage does not take place more frequently after division of urethral stricture, or, rather, why it does not always occur, is difficult to say; but there are certain cases which bleed from the time of the operation persistently for days, unless some means are taken to prevent it. Only recently I received a hurried dispatch from a surgeon in the country, who had operated upon between three and four hundred cases and had never had any trouble of account from hemorrhage,—never any that he was not able immediately to control. He wrote me that he had an important patient in

whose case he had cut in the anterior urethra, and he had bled constantly for ten days; and he wanted to know what he could do for him. The bleeding was becoming quite a serious matter, besides being a trouble and an annoyance to the man, who had reason to suppose, when he submitted to operation, that he would be able to be about his business in a few days. The doctor said that if the bleeding were anywhere where he could cut down and tie the vessels, he would not care; but here he could do nothing of the kind. He had tried all the ordinary measures, and the hemorrhage would not stop. Finally, however, the hemorrhage was controlled, and the patient made a satisfactory recovery.

We should, then, in the first place, appreciate the fact that a little gush of blood may occur at the time of the operation, which may be controlled by a towel wrapped around the penis, and there may not be any more until the patient attempts to urinate, when, perhaps, there will be another gush.

Now, in the majority of the cases, no flow of blood that amounts to much occurs; but now and then a gush takes place which is considerable—say half an ounce—and requires some means to arrest it. Then, again, erection, especially occurring at night, may bring on hemorrhage. Now, these hemorrhages may occur where you only divide the meatus. I have seen a man bleed as much as a pint from a simple division of the urethral orifice; and that, too, in a very little while. These experiences teach us that every case, whether of division of the meatus or of the deeper urethra, should be treated as though it were a case in which hemorrhage would surely occur; and then we would never be taken unawares. I take every precaution in every case, even of division of the orifice, which we then make to correspond to the size of the urethra behind it. I insist upon it that the patient shall go home and go to bed and have some one to look out for him. I take the measures which I shall show you for stopping hemorrhage immediately following the operation, and then I instruct the attendant who remains with the patient to make pressure at the end of the penis the length of the cut, until any hemorrhage that may occur shall have ceased. Now, this may seem to you, and

I know it appears so to many surgeons, to be making too much of so simple an operation. But I will give you an account of a case which occurred within the past two months. A gentleman came to me who had long suffered from a gleet, apparently the result of contraction, within half an inch of the orifice. I proposed an operation. He was very anxious that his friends at home should know nothing about it. He was not willing to have the operation done at his home in Harlem, but desired to have it done at my office, and begged very hard to be permitted to take care of himself. He said, "Now, I am not a child, or a woman, and I am not afraid of blood. I am perfectly cool about matters which trouble many people, and I do not think, even if I should have hemorrhage, that I shall fail to take care of it myself. After all you have described to me, it seems very simple indeed. All that I have to do, if I have bleeding, is to take hold of the end of my penis and press it together until it ceases." I said, "Very well. It seems to me that you are a man who can take care of himself. I have had a good many patients who have undergone the operation, taken care of themselves, and done very well." In this case, as I usually do, I took a couple of pieces of pasteboard and placed them on either side of the penis, and encircled them with several india-rubber bands. He went home very confident. He came back on the following day, and said that he had been brought into a very low place. He went home, and got along very well; went to bed as usual. He lived in an apartment-house, and in the night he got up to urinate. He took off the wrappings from his penis, and after urinating he saw that instead of passing urine he was passing blood, and he said he had a very confused sensation, and the next he knew there were about a dozen people in the room, from all quarters of the house. They had sent for two or three doctors, and his wife thought he was dying. Instead of this, he had simply observed the blood, and had fainted away with his pantaloons down. The man had probably lost altogether about two tablespoonfuls of blood. The matter excited a scandal in the house which I do not suppose has been explained up to this time. Now, I merely relate this to show you how little a matter, when neglected, may put a very respectable family under a cloud. I

never, under any circumstances, cut the orifice in my office without being thoroughly satisfied that the case is going to be well taken care of for three or four days, although no bleeding may occur at the time of the operation.

A very worthy merchant of this city had irritation at the neck of the bladder, for which I believed contraction at the orifice was responsible; and such turned out to be the case, as relief of the irritation occurred immediately after the operation. I explained to him how necessary it was that he take care regarding a possible hemorrhage. He was anxious and urgent to go down about his business, but I kept him for four days, introducing an instrument daily, and he had no hemorrhage, and he began to look at me in a very curious way and to question whether I was not making a little too much ado about the matter. He asked if I did not think that he could safely go down to his business the next day. I told him that I did not know but that he might; that he was doing very well, but that sometimes hemorrhage took place even after several days. I told him that before going to his business he might come to my office, and I would pass an instrument through the orifice. Up to that time there had not been lost half a dozen drops of blood since the operation. I passed the instrument very carefully down as he stood in my office, and, as it was withdrawn, out came a gush of blood. He bled perhaps a tablespoonful. Turning very white, he said, "Doctor, I beg your pardon. I thought you were making too much fuss about this; but I will now go home." And he went home, and stayed there for several days without urging.

Now, it may seem very unnecessary to take up so much time about so small an operation as division of the meatus, but I have had experiences which make me respect even division of the meatus, and I always insist that the patient have somebody with him during the night following the operation,—one who shall look after him, to see that he does not bleed during a temporary erection in sleep. I have never forgotten, when speaking of the possibilities of hemorrhage occurring under these circumstances, a case which I have before alluded to, in which there was a loss of a pint of blood within an hour. Dr. Markoe was once called to a case of

hemorrhage from the urethral orifice, just exactly how occurring I do not remember, in which the patient died from hemorrhage by the time he arrived. Now, such an accident is not at all likely to occur; but I tell you the worst in order that you shall be induced to take all precautions, for we often hear surgeons speaking of the operation as a trifling one, stating that immediately afterwards they simply send the patient home. I believe that, as a rule, such patients will do well; but, by reason of the exceptions, you should always be prepared for the hemorrhage which may possibly occur.

In cases of division of the orifice alone, we take a couple of pieces of pasteboard, about two inches wide, and apply them on each side of the penis, then either retain them by means of rubber bands or by means of a bandage with the end divided into four or six tails. After making three or four turns, tie, making as much pressure as may be required. Secure the tails by tying. After applying such an apparatus as this, the patient may go home, and, if it is uncomfortable, he may take it off. This is the measure adopted where hemorrhage continues to occur during urination and erection.

When the hemorrhage is deep down anywhere in the pendulous portion of the urethra, it is usually sufficient to put an ordinary bandage around the penis. This, as a rule, prevents hemorrhage; but it is always well in such cases to make a little pad and put it in the perineum, and have a stick, the end in the form of a crutch, to pass from the foot of the bed up to the perineum, that, if necessary, the patient may make pressure against the pad in the perineum, occluding the urethra at that point, and thus preventing the blood going back into the bladder. Urine drawn directly from the bladder with the catheter, and containing blood, shows that blood has gone back into the bladder; or this may be inferred if vesical tenesmus occurs. This accident is not likely to occur where the division has not been made farther back than four inches from the orifice, but it is not infrequent when the cut is at or beyond four inches. Therefore, it is desirable to have an apparatus which can always be easily extemporized, which will secure the patient against hemorrhage into the bladder. All that you will then have to do is to make

pressure at some point anterior to the cut. You can thus certainly control hemorrhage. My custom has been, when bleeding of considerable moment has occurred, to take an ordinary gum-elastic tube, or some other tube with an open end and which is well rounded at the end, so that it will not injure the urethra, pass it down beyond the cut, and retain it by means of a bandage. By this means pressure can be made so that it will be impossible for further hemorrhage to take place. The ordinary endoscopic tube answers a very good purpose, and I have used it on several occasions. I have here also some rubber tubes made for this purpose, consisting of a firm, soft, smooth rubber, which can be passed down the urethra and a bandage be applied. If the endoscopic tube is used, the obturator is removed when the patient desires to urinate. I have rarely had further trouble after using one of these tubes. If the presence of the instrument causes discomfort, it can be removed; but, as a rule, the patient will bear it long enough to arrest the hemorrhage. Should this tube not prove effectual in any given case, I introduce an ordinary catheter down below the cut, making pressure in the perineum, and then gently, with the Davidson syringe, introduce water of a temperature of 120° F., under which the mucous membrane distinctly pales, and thus immediately arrest hemorrhage. I should not hesitate to carry the temperature up to 125° F. I have a patient who has been under my care for the past two weeks, who has gradually carried the temperature of the injections for gonorrhoeal trouble up to 130° F. with perfect immunity. But I should begin with a temperature of 118° to 120° , and I should feel satisfied that this plan would arrest any case of hemorrhage that is likely to occur. Such are the measures which will relieve you of the embarrassment of having hemorrhage which you cannot otherwise arrest.

In the case of this patient, I shall keep track of him, examine his urine, and treat the cystitis just the same as if no operation had been done; for it is not necessary to give up the ordinary measures of treatment because of having divided the stricture; and I shall let you know the further progress of the case.

The other patient before us is one upon whom we operated at the same time for

persistent gleet. The gleet had continued for some time, in spite of much and varied treatment. The man had become discouraged, and he came on here from a Western city by advice of his physician to see what could be done to relieve him. I was very much interested, in reading the report of the nineteen cases reported by Drs. Tilden and Watson, of Boston, already alluded to, in the large number of cases of gleet in the list, some of several years' duration, which were cured within a month or two after the operation. We all, who see much of gleet, know that it goes on with the ordinary methods of treatment for many months, and even years in certain cases. As a rule, division of stricture results in the speedy cure of gleet. If, then, by division of stricture the cause of the gleet can be removed, such a mode of cure has the great advantage of promising permanent cure instead of temporary relief.

In the case of the second patient whose strictures were divided, an instrument No. 35, you will observe, passes very easily, and the purulent discharge has practically disappeared. Within a fortnight from the date of operation it has dwindled down to a slight amount of transparent mucus. The result, therefore, has been a very satisfactory one.

These two patients, when erections have occurred, have had slight chordee. This, following the operation, is very common, and it leads me to say that in all cases before doing the operation you should, in the first place, as far as possible reduce the inflammation that may be present. Reduce the discharge to a minimum, and, when you find that you cannot bring it down any lower, then it is time to operate. I have in several cases had to operate during an acute and profuse discharge, but the inflammation had lasted for five months acutely in one case, and the reason for the long duration of the inflammatory stage was that the urethra was full of constrictions. These strictures had to be divided before the discharge could be relieved. After the operation the patient made a very good recovery, but with marked incurvation on erection, causing temporary pain. This lasted in some degree for about a month, and then finally subsided. The greater the amount of irritation and discharge, or engorgement, or inflammation from any other cause,

sexual or otherwise, the more likely will the patient be to have chordee following the operation. I have never had a case in which it did not pass off after a time. This is one of the possible complications to be borne in mind. But these operations are not done for pleasure. They are done for an important object, and, when considering their disadvantage, or the annoyance which they cause, we must bear in mind the advantages which are expected to be gained. Patients sometimes forget the reasons which led them to submit to operations, and become impatient when cure does not follow promptly and painlessly. They should be told of possible accidents beforehand, when you are reasoning with them concerning the ultimate discomforts and dangers of their gleet, or vesical irritation, and its mode of cure. Have your patients coincide with you in the course of treatment which you propose to pursue. If the patient declines the operation, five or ten years after he may be obliged to have it done when the conditions are not quite so favorable. These patients are ever in danger of attacks of gleet, of prostatic irritation, of reflex neuralgias of the testicle and the pelvic region, of cystitis, or epididymitis. Their lives are more or less imperilled also by their influence on kidneys predisposed to, or the subject of, disease.

Any one of these complications would alone warrant a careful search for urethral stricture, even where none had been previously suspected. It should not be forgotten that such difficulties and diseases, distinctly resulting in many cases from stricture of the urethra of large calibre, are often treated for long periods by medicines the tendency of which is to impair digestion and debilitate the nervous system, or by various local applications or injections, or bougies and sounds, into the urethra,—often into the bladder,—which may, and not unfrequently does, result in grave injury to the patient when the strictures have diminished in calibre, and have caused damage to the associated organs.

The sooner, then, that a stricture has been recognized as a source of trouble and judiciously and effectually removed, the greater will be the promise of prompt and permanent relief from the difficulties which it occasions and the perils which it threatens. In such cases, the judicious and

skilful performance of dilating urethrotomy, under favorable conditions, in my judgment, affords the necessary relief with the least discomfort, the least risk, and the least loss of time.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,

Neurologist and Electrician to the Presbyterian Hospital;
Physician to St. Mary's Hospital.

THE advance made in electro-therapeutics for some two years past has not been, apparently, either rapid or extensive; nevertheless, much has been done without its appearing in our journals. This neglect is the more reprehensible because the entire subject of the practical employment of electricity and magnetism in medicine and surgery is ignored by nine-tenths of the general practitioners, and it is but imperfectly understood by the majority of those who do attempt to use this invaluable agent. As a consequence of the little to be learned outside of special works on the subject, too many physicians who do not own such books have relied on faradic currents exclusively in all cases, partly because the mechanism involved is more readily handled and cheaper to purchase, and also because the original plant required in using galvanism is not only more expensive at first, but is also more costly and difficult to maintain. In addition, the proper methods of applying it are unknown, or, what is worse, it is used hap-hazard. It is very important that in all reported cases the *precise* method of application should be accurately described.

In considering the subject of galvanism, the batteries for producing constant currents have been much improved lately. The cumbersome, dirty, and troublesome elements which for a long time were employed have been superseded by cells of a simpler type, and the first cost of these is not alone less, but their maintenance is also cheaper. The Hill gravity, the Léclanche prism, and the Law elements are each economical and readily manageable by any one; and, as they are largely used by telegraph- and telephone-companies, such parts as may be required for repairs

are readily obtainable at low rates through dealers in all large cities.

In the treatment of migraine, or sick headache, galvanism has lately been more generally employed than heretofore, and in most instances the use of purgatives is by this method rendered unnecessary. In the practice of the writer, galvanism has taken the place of the bromides, chloral, caffeine, and allied drugs in the majority of instances, particularly in obstinate or long-standing cases. The persistent insomnia accompanying typhoid and other low febrile conditions has been admirably controlled by galvanism.* In exophthalmic goitre an increasing list of successful results has been noted, and attention has also been called to the fact that only constant currents possess the power of acting on the heart-muscle, not alone in the disease named, but at any time; and the idea entertained by many that induction-currents were capable of modifying cardiac movement is shown to be fallacious when the electrodes are applied to the thorax in the usual manner (over the sternum and between the scapulæ). The writer is not inclined to accept the statement that faradic currents cannot modify cardiac action, *however* applied, because experiment has satisfied him that tumultuous palpitation is frequently calmed if the faradic current is directed through the pneumogastric from the angle of the jaw to the solar plexus, or the lower electrode may be applied over the sternum, the probable explanation being that induction-currents as ordinarily applied are more liable to traverse the superficial fascia around the thorax, instead of passing directly through from one pole to the other, as constant currents will.

Seligmüller† has reported very favorably on the use of electricity in acute articular rheumatism. The preferable method is to fasten one pole to the affected joint by means of a wet bandage, the other being applied above the articulation on any convenient point. Long-continued mild currents are recommended; and, although it is not stated which variety is to be used, the general tone of his remarks points to faradism, although, as is well known, galvanism is far better adapted for the relief of pain in any affection for which electricity is indicated. Hydrar-

* Philadelphia Medical Times, vol. xi. No. 350.

† New York Medical Record, December 22, 1883.

throsis has been reported as notably benefited by prolonged applications of the constant current, after failure of ordinary methods of treatment, by several reliable authorities.

Attention has been called quite recently to the value of electricity in treating intermittent fever, all other remedies in these cases being avoided. The writer of this paper has given* a series of thirty cases thus treated successfully, and in a following article† has given an account of experiments made to determine the effect of electrical currents of differing character upon the so-called disease-germs. Although bacteria of all kinds are readily destroyed by electricity, however generated, it is not probable that the favorable results of treatment attained in paludal and like fevers is due to electricity as a germicide; but the benefit is more likely attributable to its action on the general nervous system, but particularly on the sympathetic. The reduction of enlarged spleen or malarial ague-cake is readily accomplished by electricity without the aid of quinine, iodine, mercury, or other sorbafacients.

In gynecology and obstetrics, electricity has been increasingly used, and many obscure cases of reflex nervous disorder due to ovarian congestion and neuralgia, which had obstinately resisted other treatment, have been overcome by galvanism. In all such cases it is essential that, in addition to the tonic effect of general applications, the main attention must be paid to the uterus and ovaries, the current being confined to them by suitable electrodes.

The cuts illustrate the rheophores used in uterine applications by the writer. No. 1, Fig. 1, is intended to confine the current to the uterus alone, as it enters by the straight rod, which is insulated to the tip, at which point the current leaves, and, traversing the body of the uterus, it enters the perforated ball, and by way of the insulated curved rod returns to the battery. The straight rod is movable lengthwise, to reach the fundus in long or short canals, and is also flexible, to pass flexions. The large perforated uninsulated ball is placed against the os externum after the intra-uterine rod is entered sufficiently, and the current is then established.

No. 2 is the ordinary sound insulated all except the intra-uterine two and a half inches.

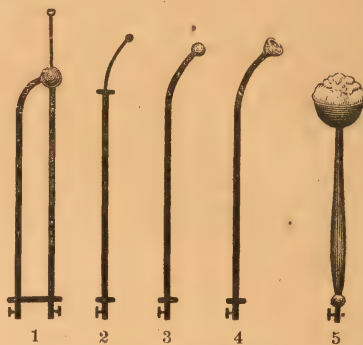


FIG. 1.—Rheophores.

No. 3 is a ball rheophore for the cervix or the ovaries, used per vaginam.

No. 4 is a cup-shaped rheophore for the cervix.

No. 5 is the ordinary sponge-handle for external use.



FIG. 2.—Direct Uterine Electrization.

Fig. 2 shows direct uterine electrization by an intra-uterine sound (No. 2, Fig. 1), the other pole being divided and applied over the pubes and genito-spinal centre.

Fig. 3 shows conjoined utero-ovarian electrization, the negative in the uterus and the positive divided and applied over each ovary. In all cases where electrical treatment is applicable, *localization* is followed by good results, which cannot be obtained by treatment applied aimlessly over the abdomen and back, as ordinarily seen.

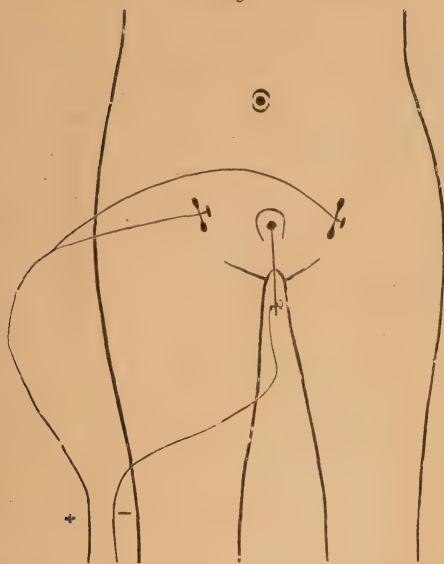
Several cases are noted where post-

* Medical Bulletin for November, 1883.

† Ibid. for December, 1883.

partum hemorrhage has been checked by faradization of the womb, after other

FIG. 3.



methods, including ergot, ice, vinegar, and hot water, had failed.

Abdominal dropsy has been considerably relieved, as reported by several observers, by general faradization. In one of the writer's cases this plan achieved the cure after ordinary treatment by diuretics, purgatives, and sudorifics failed. The patient was the son of a physician, and was convalescing from a severe attack of scarlatina, when nephritis supervened from a cold, and the albuminuria exceeded anything in his experience short of a fatal termination. In dropsy from hepatic disorder good results do not appear under electricity, as a rule, although torpid liver is readily stirred into action by induction currents.

The induction-balance has been rendered more perfect since its useless attempt in the case of President Garfield, and may in the future be of service. The various accumulators or secondary batteries are not as yet of any value, except for very short and expensive applications of the cautery or incandescent light.

The revival of static electricity from its long slumber, some two years ago,* has developed its value in amenorrhœa, spamenorrhœa, and many cases of dysmenor-

rhœa; and the facility with which this form of current is now producible by the improved Toepler-Holtz machines enhances very materially its importance to the neurologist as well as to the gynæcologist.

As a galactagogue, static electricity has proved serviceable† in several reported instances; and in the chest-pains of phthisis‡ it has not only relieved the suffering, but its effect on the general nutrition has been good. The distressing night-sweats in pulmonary disease have been modified in some instances, and in others abolished for a considerable length of time, by this form of electricity.

In constipation from torpor of the intestinal muscles, static electricity has proved of service, and in jaundice from congestion of the liver and obstruction of the biliary ducts strong shocks from Leyden jars have overcome the condition.

In surgery the galvano-cautery divides honors with Paquelin's thermo-cautery; but with a competent operator there can be no doubt whatever as to the greater utility of the electric wire, there being less radiated heat to possibly do damage to adjacent parts, to say nothing of the danger always attending the use of benzine or its compounds in unskilful hands in connection with flame. Accidents have happened repeatedly with the gasoline cautery which would with the galvanic cautery or electric *écraseur* have been impossible. Seiler§ advocates the galvano-cautery knife (of his own construction) for intra-nasal hypertrophies, and also finds the heated loop admirable for the removal of pediculated tumors of the naso-pharynx and larynx. In this he is supported by other recognized authorities.

Urethral stricture has been lately treated with very great success by galvanism in the hands of several surgeons.|| It has been long known that insulated bougies would pass narrowed points under both faradic and galvanic currents, without undue force, which could not be traversed by ordinary instruments of the same or frequently considerably smaller calibre. Under electrolysis, urethral stenosis is in suitable cases overcome with little difficulty, without forcible rupture, and the tendency to fe-

† Philadelphia Medical Times, vol. xii. p. 103; New York Medical Journal, vol. xxxvii. p. 138.

‡ Bartholow, *ibid.*, April 14, 1881.

§ Diseases of the Throat and Nasal Cavities, Second Edition, H. C. Lea & Co., Philadelphia.

|| Dukeman, New York Medical Record, January 5, 1884.

* Blackwood, Medical and Surgical Reporter, March 12, 1881; Morton, New York Medical Record, April (four numbers), 1881.

brile disturbance is less than with the more commonly employed methods.

Obstinate gleet has succumbed to electricity in instances where the discharge was probably due to contraction of the deeper urethra.*

In hysterical manifestations the application of powerful magnets to anæsthetic regions of the body has, it is stated, induced a return of sensibility to such parts, at the expense, however, of other localities, which in turn become insensitive, this phenomenon being grandiloquently termed "consecutive oscillations," a wobbling about of imaginary symptoms which radical measures—as, for example, the actual cautery (either galvanic or a simple hot poker)—would have undoubtedly relieved instantaneously and permanently.

A legitimate use of the magnet has been frequently made in ophthalmic surgery in the extraction of metallic foreign bodies which have penetrated the eyeball. Particles of iron and steel have in many instances been removed by means of specially-devised instruments, consisting of a permanent or electro-magnet attached to a slender rod or probe, which is usually introduced through the original wound of entrance. In all cases the *electro-magnet* is preferable, because the point of the extractor can be in this form placed against or near the body to be removed, before any attractive force is developed, and the actuating current can then with advantage be produced. In deeply-seated fragments of iron the attractive force of a permanent magnet of ordinary power, on the contrary, would be exerted at once on its reaching the cornea or conjunctiva before the better line of extraction could be secured; and instances have happened where the spicula has jumped promptly to a permanent magnet in a direct line before the operator intended it to act, and a second wound of the organ has unintentionally and unfortunately thus happened.

Electric lighting, both for out-door and in-door purposes, has received a great impetus within the past two years. It is too early to say authoritatively what bad effect, if any, this method of artificial illumination has had or will have upon the general health, and especially the vision, of persons

using it. A material difference exists between the two methods of arc and incandescent lamps, the former being principally used for out-door purposes or the lighting of large halls or rooms by a few powerful lights, and the latter for those instances requiring a standard of fifteen to twenty candle-power at each point, much the same as with gas or petroleum. The unsteadiness and blue tinge of the arc light is a disadvantage which must interfere with its general adoption, except for the purposes alluded to; but the soft, white, and perfectly steady light of the incandescent systems admirably fits them for all household use. The absence of the heat arising from gas, the fact that oxygen is not consumed by the light, the non-production of carbonic oxide or acid fumes, the safety from fire or explosion, and the absolute steadiness of a good incandescent electric lamp, such as the Swan, the Lane-Fox, the Maxim, or the Edison, must before long not only force their introduction into factories, large stores, public buildings, or other places where an isolated plant is economical (and in any case electric lighting on this system is more economical than gas, light for light), but, as in parts of New York City, large districts will ultimately be supplied from central stations as a matter not alone of economy but of convenience.

Several exceedingly ingenious arrangements for using the incandescent light in aural, laryngological, and ophthalmic medicine and surgery have been recently made. Minute lamps have been affixed to the laryngeal or rhinoscopic mirror for the illumination of the pharynx and adjacent regions; but the substitution of the incandescent light, applied either to the Toboldt stand or directly to the head-reflector, affords at once a brilliant light and one which shows the parts under inspection in their normal colors,—a matter of moment to inexperienced observers, who are not so ready to make allowance for this point as their elder *confrères*.†

Many other points in the application of electricity to medicine and surgery might be adverted to, but time and space forbid. It is not only the direct employment of electric currents of any or all forms to diagnosis or therapeutics that interests the practitioner, but the wonderful facility of

* Medical and Surgical Electricity, Beard and Rockwell, First Edition, p. 660; New York, Wm. Wood & Co., 1871. Blackwood, Philadelphia Medical Times, November 4, 1882, vol. xiii. No. 390.

† Baker, British Medical Journal, November 10, 1883.

intercommunication which enables the interne at a hospital to summon his chief, or the private patient to call his medical adviser to the bedside, without reference to distance, time, or weather, through the telephone exchange; and the untiring vigilance and unfailing accuracy with which electricity serves us in numerous affairs of business as a silent watchman, a faithful recorder, and an assistant not to be tampered with or bribed, render it simply a matter of time when its services will be required and secured in the production of absolutely truthful sphygmographic, respiration, and temperature charts in all complete hospitals.

Electricity is not the mysterious agent now that it was considered a few years ago, but there is still plenty to learn concerning it and its uses; and not the least important line of research is that which invokes its aid in the alleviation and cure of disease. As was said at the outset of this paper, careful reports should be made by those who employ it largely in practice, for the benefit and guidance of those not as yet proficient in its use, in all cases precision being observed as to the current used, method of application, and definite measurement.

246 NORTH TWENTIETH STREET.

EXPERIMENTAL USE OF CANTHARIDES AS A DIURETIC.

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine, University of Pennsylvania.

MARY G., æt. 18, a native of Philadelphia, was admitted into the University Hospital May 20, 1883. She had never been unusually exposed to bad weather, had never had venereal disease, nor had she used alcoholic liquors. Her family history was free from hereditary diseases. She had had the specific fevers of childhood, except scarlet fever. She had since been well and strong up to three years before above date. At that time she had an attack of pneumonia, from which she completely recovered, but soon after commenced to have painful micturition. Fourteen months prior to admission to the hospital the usual train of symptoms of chronic parenchymatous nephritis developed, with general anasarca. She passed the year with fluctuating fortunes, now better, again worse, always with much headache. When admitted to the hospital, her face was pale, waxy, and puffy. There was marked ascites, some double pleural effusion, and general

anasarca. She complained of constant frontal headache, at times drowsiness; pupils were small; nausea and vomiting constant; in a word, a uræmic attack seemed impending. There was hypertrophy of the left ventricle, with accentuation of the aortic second sound. The urine measured eighteen ounces in twenty-four hours, was albuminous, and microscopic examination revealed an abundant deposit of tube-casts, mostly granular, but some containing a few epithelial cells.

Treatment.—For a month skim-milk diet and other remedies were employed, without much benefit. The uræmic symptoms were constantly threatening. She was then given tinct. cantharides without other medicine, at first three drops t. d., then four times daily, and finally five times daily. The dose was also raised to six drops.

Within a week the urine commenced to increase, the uræmic symptoms to lessen, and the anasarca and dropsy became gradually reduced. When she left the hospital, in August, she was passing daily five pints of urine. The use of the drug was continued after the patient went to her home, but was finally discontinued about the middle of October. The diet during this period was, however, sedulously limited to milk-porridge or eggs. After October iron was employed.

The girl is now able to return to her occupation in a store, and is quite healthy in appearance. The urine is, however, still slightly albuminous, and contains some few casts.

The history of this case is, in its general features, representative of seven other cases, in each of which the diagnosis of chronic parenchymatous nephritis was made. In three of them the use of cantharides as a diuretic was negative; but in the other four signal diuretic action was produced.

In the dispensary of the Children's Hospital I have also used cantharides as a diuretic, combined with tinct. digitalis in cases of cardiac dropsy. The children's ages ranged from five to nine years.

In the wards of the Philadelphia Hospital I have also used cantharides in five cases of cardiac dropsy to fulfil the indications for the use of a diuretic. The use of the drug in these cases was never accompanied by deleterious effects, while it very constantly increased the urinary secretion, forming a valuable adjuvant with the digitalis. The maximum amount of the drug employed, in adults, in twenty-four hours was thirty drops, but usually not over eighteen drops were used. In the cases of the children smaller doses were employed.

The use of cantharides is mentioned by

William Roberts, of London, in his work on renal diseases, and by Dr. Wells, in seven cases. In Dr. Wells's cases, thirty to fifty or even sixty drops were administered per diem, with good effect in five cases. Ringer also reports well of it, but adds, "It is an uncertain remedy, which might be dangerous in inexperienced hands." Ringer, in the tenth edition of his *Hand-Book*, alludes to the high authorities who have recommended cantharides in certain forms of Bright's disease, and says that the "discrepancies respecting its effects arise, perhaps, from the differences in the dose administered by various observers."

He is convinced of its usefulness, even in acute Bright's disease, after the subsidence of the active inflammation and fever, say the fifth to the eighth day. He believes that in the state which follows the subsidence of the more acute stage "the urine continues small in quantity, contains albumen, and perhaps blood. If at this time, that is, just on the immediate subsidence of the acute inflammation, a one- to three-minim dose of tinct. cantharides is given every three hours, the blood will almost always quickly disappear, while the albumen decreases more gradually and the urine becomes more abundant. At a crisis like this it is true that a like amendment not unfrequently takes place without any treatment; but the influence of cantharides can often be put to a conclusive test. To a patient in the condition described above, passing urine containing albumen and much blood, give the drug in the way pointed out, and he will begin to improve. Now withhold the medicine, and both blood and albumen will return in the original quantity; and this effect can be repeated again and again." The majority of writers, however, upon therapeutics or upon renal diseases do not mention cantharides, or else, with Dickinson, are unfavorable to its use.

In the number of *Virchow's Archiv* issued November 5, an elaborate experimental study of the action of cantharides upon the kidney is reported by Dr. Eliaschoff:

The changes in the kidneys involve chiefly the glomerulus and the convoluted urinary tubules and the ascending branch of Henle's loop. At first there are the characteristic appearances of glomerular nephritis, whilst the urinary secretion is

diminished or almost suspended, is albuminous, and contains colorless and some red blood-corpuscles. There is a degeneration of the inner portion of the epithelium, which undergoes granular degeneration, disintegration, and desquamation. The peripheral part of the epithelium, together with the nuclei which have not escaped into the lumen of the tube, remains as a small continuous layer upon the basement-membrane. The ascending portion of Henle's loop is least affected. The collecting tubes of the medullary substance undergo simple epithelial desquamation. Fibrinous casts are not usually found; but Eliaschoff believes that this is explicable by the early deaths of the animals, since the degenerated cells must eventually have formed casts. Eliaschoff believes that the action of cantharides occurs principally after the separation of the cantharides in the glomerulus. When cantharides is given, the effect is produced in about half an hour. In animals killed at this period the lesions are found in the glomerulus. Later, after two or three hours, the uriniferous tubules are affected. The changes can be attributed to the cantharides flowing down the lumen of the tubules. This was demonstrated by the venous injections of the indigo-sulphate of soda. The experiments show that the greater the interval between the administration of the cantharides and the indigo-sulphate of soda, the less coloring-matter will be eliminated by the injured tubules. The author contrasts the difference between cantharides and chromic-acid poisoning as throwing light upon the physiological action of cantharides.

In both forms there are changes in the glomeruli and uriniferous tubules, substantially the same, but there is in chromic-acid poisoning an absolute destruction of the secreting epithelium, with abundant formation of casts, whilst with cantharides, although there is degeneration of the epithelium, a peripheral layer of nucleated epithelium remains. In chromic-acid poisoning, therefore, it is probable that the hurtful substance is eliminated by the epithelium and destroys it while passing through. In cantharides poisoning, on the other hand, the drug apparently acts upon the epithelium from within the lumen of the tubules.

It would appear from the above account of the physiological action, and from the writings of Ringer, that cantharides may

act as an alterative stimulant upon the kidneys. In my own cases the diuretic effect has been satisfactory in many instances, and in some of the cases the specific gravity of the urine has increased under its use; but I think the former effect is all that can be said for it in my experience. Cantharides undoubtedly produces positive effects upon the genito-urinary tract, as well as upon the renal organs, warning us that its therapeutic use must be guided by discretion.

The treatment of Bright's diseases by diuretics has been justly superseded by the dietetic and diaphoretic measures now in use. There remain, however, cases in which it becomes an absolute necessity to endeavor to lessen the dropsy by acting directly upon the emunctories. Purgatives are objectionable on account of their irritant effect upon the digestive tract: besides, they entail considerable loss of strength. The diuretic substances often offend the stomach, and diaphoretics may not be available.

The purpose of this communication is to record, in an *experimental* manner, the possible uses of cantharides as a diuretic, and to show that, properly used, its action is not harmful. The renal conditions upon which I have found tincture of cantharides act favorably are those of chronic catarrhal nephritis combined with some interstitial process, and associated with more or less cardiac hypertrophy. It has proved decidedly less useful in cases in which the heart was feeble. In these cases it may still be rendered effective when combined with preparations of digitalis, although digitalis given alone was inoperative. I have never attempted its use in cases which possessed any acute element. In the cases of cardiac dropsy it was always given with digitalis, and, since its effects as shown by the physiological action (Eliaschoff) occur partly through its local action upon the renal secreting cells, it is reasonable to suppose that digitalis, by increasing the efficiency of the circulation, should increase the effect of cantharides as a diuretic. Certainly its small bulk renders it a convenient and acceptable drug to patients, whether adults or children.

DR. THEOPHILUS PARVIN has been elected one of the Attending Obstetricians to the Philadelphia Hospital.

A NEW APPARATUS FOR THE ESTIMATION OF UREA IN URINE BY THE HYPOBROMITE METHOD.

BY WILLIAM H. GREENE, M.D.

THE estimation of urea by the measurement of the volume of nitrogen disengaged when urine is mixed with a solution of sodium hypochlorite was proposed almost at the same time by Le Conte* and Davy.† Knop‡ replaced the hypochlorite by hypobromite, and Huefner,§ Magnier de la Source,|| and Yvon¶ have devised special and admirable apparatus for the practice of the analysis.

The principle of the analysis is the same in all cases. A weighed or measured quantity of urine is mixed with an alkaline solution of sodium hypobromite: the urea at once decomposes into nitrogen and carbon dioxide, the latter is absorbed by the alkali, and the volume of nitrogen is measured. The quantity of urea contained in one hundred cubic centimetres of the urine is then calculated by the equation

$$x = \frac{100v(h-h')}{760 \times 354.3 \times a(1 + 0.003665t)}$$

in which v is the volume of nitrogen, h the barometric pressure in millimetres, h' the tension in millimetres of aqueous vapor at the temperature t , and a the volume of urine employed.

As suggested by Yvon, barometric and thermometric observations may be dispensed with, and the calculation greatly simplified, by making a simultaneous estimation of the nitrogen evolved from one centigramme of urea under the same circumstances. Let this last volume be m , and the volume disengaged from v cubic centimetres of urine be n ; then the number of centigrammes of urea in 100 c.c. of urine will be

$$x = \frac{100n}{mv}.$$

The different forms of apparatus that have been employed vary only as to the manner of mixing the urine with the hypobromite solution, and collecting the evolved gas. Several methods have been proposed and recommended, in which the decomposition is effected in a vessel con-

* Comptes-Rendus, xlvii. 237.

† Philosophical Magazine, vii. 385.

‡ Zeits. An. Chem., ix. 225.

§ Jour. Prak. Chem., iii. 1.

|| Bull. Soc. Chim., xxi. 290.

¶ Anal. chim. de l'Urine normale, Paris, 1875.

nected by means of a rubber tube with a graduated burette in which is measured the increased volume of gas due to the addition of the nitrogen to the air already contained. No great precision is attainable by any such apparatus, and at the same time the manipulation is no easier than with the apparatus of Huefner and that of Yvon, which yield exact results.

HUEFNER'S APPARATUS is in three pieces: the decomposition-tube is separated by a glass stop-cock into two portions. The contents of the lower and smaller division, including the hollow of the stop-cock, must be accurately determined. The upper compartment contains the hypobromite, and fitted to this by a ground joint is a hemispherical reservoir.

In the practice of the analysis the lower compartment and the hollow of the stop-cock are completely filled with the urine by the aid of a long funnel-tube. After closing the stop-cock, the upper compartment is filled with the sodium hypobromite solution diluted with its volume of water,

and the reservoir is filled to a convenient height with a cold saturated solution of common salt. After all air-bubbles have disappeared, the graduated measuring-tube, filled likewise with common-salt solution, is placed in the reservoir over a little projection on the end of the decomposition-tube. On turning the stop-cock the urine passes into the hypobromite solution, and there is a tumultuous disengagement of gas. In about fifteen minutes the decomposition is complete; the measuring-tube is then closed with the finger and transferred to a deep jar filled with water, in which the volume of gas may be accurately read.

This apparatus is expensive and somewhat troublesome, but very accurate results may be obtained.

YVON'S APPARATUS is much less complex than the preceding. It consists of a straight tube, open at both ends, and provided with a stop-cock near the upper fourth. It is graduated in both directions from the stop-cock. This apparatus requires the use of a deep mercury-trough, into which the ureometer is plunged until the longer division is filled. The stop-cock is then closed, and one or more cubic centimetres of urine measured into the upper compart-

ment and allowed to flow into the lower by raising the tube and opening the stop-cock;

several cubic centimetres of sodium-hydrate solution are introduced in the same manner, for the purpose of rinsing all of the urine into the lower division. The upper compartment is then completely filled with hypobromite solution, which is rapidly passed into the urine by raising the tube and turning the stop-cock. The gas collects above the liquid on the mercury, and its volume is measured after bringing the mercury to the same level in the ureometer and the trough. Special care is necessary that no air-bubbles be allowed to enter while introducing the hypobromite solution: any that may enter before that time can be driven out by suitably depressing the tube in the trough, while the stop-cock is open.

The manipulation and measuring with this apparatus are more rapid than with Huefner's, but require still greater precision. The results are exact.

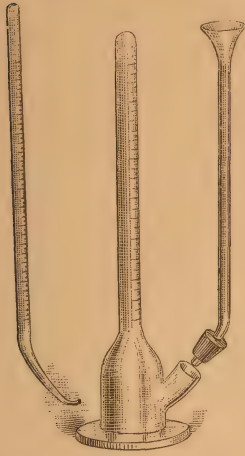
A NEW UREOMETER. In order to simplify the apparatus and the necessary manipulations, I have devised the form shown in the figure on the opposite page. It consists of a small glass flask and measuring-tube in one piece. The flask is on a rather heavy base, to afford necessary stability.

The apparatus is completely filled with the hypobromite solution, and placed on a plate destined to receive the liquid which overflows during the analysis. By the aid of a pipette, of which the end is so bent that it may pass to the centre of the flask, a measured quantity of urine—one, two, or the desired number of cubic centimetres—is introduced, and the decomposition takes place as the liquids mix. The opening of the pipette must be so small that only three or four cubic centimetres run out per minute.

When the desired quantity of urine has been decomposed, a rather wide funnel-tube is adapted to the opening in the flask, and filled with hypobromite solution until the liquid is at the same level in the funnel-tube and the measuring-tube. The volume of gas is then read, and the necessary cal-



culatation made; or an aqueous solution of one centigramme of urea may be introduced, and the increase in the volume of nitrogen may be compared with the volume yielded by the urine.



This apparatus will be comparatively inexpensive, and, with proper care that no urine is allowed to flow from the pipette until the end of the latter is well in the flask, the results are as exact as can be desired for all

excepting the most precise physiological researches. The only objection is the rather large quantity of hypobromite solution required; but, as this is very cheap, the quantity used is of little consequence.

3225 SANSOM STREET.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF WILLIAM PEPPER, M.D., LL.D.,
ONE OF THE PHYSICIANS TO THE HOSPITAL,
AND PROFESSOR OF CLINICAL MEDICINE IN
THE UNIVERSITY OF PENNSYLVANIA.

Reported by WILLIAM H. MORRISON, M.D.

ABCESS IN THE RENAL REGION.

GENTLEMEN,—This Italian was admitted to the hospital some time ago with a swelling in the left lumbar region. There was discoloration, heat, swelling, and tenderness. It was entirely clear that it was an abscess. The aspirator was employed, and thirty-two ounces of laudable pus withdrawn. The pain and temperature were greatly diminished, but the abscess gradually refilled, and two weeks after the first tapping the aspirator was again employed, and eight ounces of pus removed. Since that time the general health has steadily improved, and the abscess has refilled to a slight degree only.

What we were particularly concerned about was not merely as to the diagnosis of abscess, for that was a very simple affair, but it was as to the character and source of the abscess. By means of an in-

terpreter, we obtained the statement that ten years ago this man had precisely the same kind of a swelling in the same place, following a strain, that it went on to supuration, that it was lanced, the pus was evacuated, and the abscess closed, and that from that time until the present his health had continued good, when, without any adequate cause, a second abscess formed in the same region. The man is a wretched, broken-down specimen, as most of the Italians who come to the hospital are. They have been exposed to every cause of depraved health, and when they break down they come to us in a most miserable condition. We have been unable to obtain any other information as to the man's past history, and I am unable to say whether or not he has had syphilis.

In looking at this abscess, the thoughts which occurred to me were—(1) was it the result of disease of the bodies of the vertebræ? (2) was it connected in any way with the left kidney? or (3) was it a simple phlegmon, resulting from some injury in a man who was in a wretchedly depraved state of general health?

Observation showed that there was no curvature of the spine, no prominence of the spinal processes, and no special pain along the region of the spinal column. The history of an abscess occurring ten years ago and terminating in recovery was opposed to the idea that this was connected with serious organic disease of the bone, since in the adult a carious abscess of this character is, as a rule, very intractable, and is apt to continue running, until the patient is worn out by the disease. There seems to have been no difficulty about the cure of the first abscess, which, after being opened, readily healed.

The position of this abscess would suggest the possibility of its connection with the kidney. As we study the renal region more carefully, we find that suppurative inflammation of the kidney and of the connective tissue surrounding the organ is far more frequent than was formerly supposed. Perinephritis and perinephritic abscess are conditions far from rare. I have seen abscesses in the renal region which did not point in the back at all, but burrowed down along the spinal column, and their connection with the kidney-region was with great difficulty recognized. It was only by very careful percussion of the two renal regions, and a critical study of

the subjective symptoms of the patient and the evidences of pressure and irritation in the line of the ureter, that their true nature was recognized. In other cases, the collection of pus pointed in the lumbar region, outside of the line of the erector spinæ muscles. I have seen this in connection with suppurative pyelitis—that is, inflammation of the pelvis of the kidney—resulting from the presence of a calculus, and going on to suppuration, ulceration of the pelvis, perforation and the formation of an abscess around the kidney, communicating with the cavity of the pelvis of the kidney. I have even extracted calculi in the lumbar region outside of this line, and have seen this followed by healing of the fistula. In scrofulous children, in whom perinephritic abscess is more common than it is in adults, I have seen the abscess open in this situation, and the discharge continue until the abscess has healed or the patient has been worn out by the disease. I have had operations performed on the renal region, and pus evacuated which has evidently come from the kidney. In this case the abscess was very superficial, and the line of demarcation was quite definite. There was no pain on deep pressure in the left hypochondriac region. There were no symptoms of disorder of the urine. There was a history of an abscess in the past, which had terminated in recovery. Taking these points into consideration, we concluded that this was a curious instance of a recurring abscess in the subcutaneous connective tissue, but not connected with any serious deep-seated trouble.

The result of the case has shown the correctness of the diagnosis. There is now only a little fulness. There is some pus in the abscess; but the amount is small. If it should refill, a small opening will be made, and the abscess dressed antiseptically.

MULTILOCULAR PLEURISY.

This patient was before you about three weeks ago. He is an Italian, a laborer, and was admitted July 10. There is no known hereditary tendency to phthisis. He had had a slight cough for some time, but was otherwise well until a week before admission, when, after exposure, he was taken with a violent chill, followed by fever. The temperature on admission was 103.4° . There was likewise severe pain in the right side, and the signs of a pleural effusion were de-

tected. He was tapped three times, but only small quantities of fluid were obtained. The first tapping removed three and a half ounces, and was followed by temporary improvement, the temperature falling to normal. In a week the former symptoms returned, with rise in temperature, and he was again tapped, and four ounces of fluid were drawn off. Improvement again occurred for about a week, when the former symptoms returned, and tapping was again resorted to, but this time no fluid was obtained. When this man was before you on the last occasion, I took the liberty of discussing with you, in the absence of my colleague, the propriety of these early and small tapplings. There is a good deal to be said on both sides of the question.

Since you last saw him there has been a gradual improvement, until last week, when the temperature rose to 102° for a day or so. It has again fallen to the normal. The urine is fair in amount, acid in reaction, with a specific gravity of 1015, and contains a small amount of albumen, but no tube-casts. The treatment has consisted of iron, quinine, iodide of potassium, and flying blisters over the affected side.

When you last saw him, he looked wretched, anæmic, with an anxious expression of countenance; he had hectic fever, night-sweats, fever during the day, harassing cough, and very copious mucopurulent expectoration, which was so free that it almost filled a pint cup from early morning until ten o'clock. On examining the chest, I pointed out to you that there was over the posterior part of the right side flatness on percussion from the spine of the scapula down to the base of the chest, and from the line of the vertebræ around to the nipple-line in front, gradually sloping downward to one inch above the upper margin of the liver. Above this, in front, the chest was resonant. Over the upper part of the right chest in front, where there was good resonance on percussion, I found, on auscultation, numerous snoring and mucous râles. From the history we learn that this man, without any hereditary tendency to phthisis, had presented a cough for a certain length of time before the pleurisy developed; that the tapplings which were performed had resulted in very small discharges of fluid; and that, although the last tapping

did not withdraw any liquid, the symptoms of chest-irritation continued, attended with an irregular type of fever, with continued loss of flesh and copious expectoration, so that we were forced to consider the question whether this pleurisy was an idiopathic and original affection occurring in a comparatively healthy man, or whether this man had incipient phthisis with intercurrent pleurisy, and whether the symptoms which were present were dependent upon continued pleural irritation or upon organic trouble in the lung. You will at once see how difficult it was at that stage of the disease to decide these questions. We came to the conclusion that, on the whole, the burden of evidence was favorable to the patient. The pleurisy was of that unusual form which is termed multilocular, or cystic, in which there is a great deal of fibrin, with comparatively little serum, the fibrin being so arranged in bands of false membrane as to break the pleural cavity into a number of smaller spaces, and the serum distributed through these spaces, so that although the symptoms indicated a considerable effusion, yet the punctures which were made only opened one of these small spaces and removed but a few ounces of fluid.

In this form of pleurisy the course of the case is always slow. It takes a long time for the plastic exudation to undergo organization, and while this process is in progress there will be more or less constitutional irritation and fever of an irregular hectic type. The character of the pleurisy justified us in hoping that the constitutional symptoms might prove to be largely due to the pleural inflammation. Again, although there were these râles at the apex of the right lung, yet there was no dullness on percussion, no evidence of consolidation, no increased fremitus, and no prolongation or blowing character of the expiration: so that it was possible that this was merely a local bronchitis.

The man was put to bed; blisters were employed over the affected side; he was given cod-liver oil, with nourishing food, iodide of potassium, and a moderate amount of stimulant. The albumen soon disappeared from the urine, and from that time the man has steadily improved.

There are still some coarse râles at the upper part of the right lung in front, but less numerous than they were. There is no dulness. The pulse is still weak. We

shall place over the right apex a blister two inches square, continue the same treatment, and allow him to be out of bed for five or six hours during the middle of the day.

PHTHISIS OF MODERATE SEVERITY COMPLICATED WITH PLEURAL EFFUSION—ASPIRATION.

This man is 33 years old, and has been in the hospital nine months. He was at first under the care of Dr. Edward T. Bruen, who gives us the following account of the man while under his charge: "This patient was admitted in February last, with very few physical signs of any process in the lung, but at the same time he had a severe cough. After being in the wards for a week, he had a hemorrhage of several ounces from the lung. He then had repeated hemorrhages from week to week, which were very difficult to control. The physical signs were insignificant, and for two or three months it was difficult to demonstrate the presence of phthisis. As spring came on, the cough subsided, and at that time the signs of consolidation at the right apex presented themselves, but the signs of a cavity have never been detected." About two weeks ago he noticed a splashing sound on the left side. This was attended with a violent fit of shortness of breath. There has, then, been a history of phthisis, followed by some complication.

This is the first time that I have seen the patient, and I shall examine him before you. As he is lying on his back, the resonance on the left side in front is almost tympanitic in character. On the right side it is normal down to the liver. When the patient sits up, the resonance posteriorly on the left side is good. On looking at the right side there is at once an appearance of distention of the chest, and on percussion flatness extends from the liver up to the line of the angle of the scapula. Placing my fingers on the chest and percussing, I feel a very distinct fluctuation. I have never before seen a case in which this sign was so marked. Now when the man is sitting up there is dullness in front on the right side, where before there was resonance. When the patient lies down, the resonance returns.

We have in this case phthisis of moderate severity, complicated with a large pleural effusion of the right side. This pleural effusion is so great and the muscular tissues are so weak that the diaphragm has been pushed down and the respiratory

muscles of the right chest paralyzed. This causes intense dyspnoea, and raises a very important question,—that is, whether or not in a case of pleurisy complicating phthisis the liquid shall be withdrawn by aspiration. Internal treatment and local applications rarely remove a large effusion in such cases. It is nearly always chronic and rebellious to treatment. Shall you, therefore, operate? This question cannot be answered in the same way in every case. You must be governed by the amount of disturbance which the effusion causes, by your knowledge of the form and extent of the lung-disease, by your judgment as to how much of the symptoms are dependent on the organic lung-disease and how much upon the pleurisy, and by the question whether the phthisis was rapidly progressing or comparatively stationary at the time the pleurisy developed. If the patient has been suffering greatly from phthisis, the disease making rapid progress, and pleurisy occurs, but the distress not being much increased by it, I should be in favor of not operating; but in such a case as the present one, where the physical signs are not marked and the course of the disease is not rapid, and a pleurisy with large effusion occurs, producing great distress, I am in favor of operating. I am in favor of it, no matter what the character of the effusion; but as to the mode of operating I should be governed by the character of the fluid. I shall pass a hypodermic needle into this chest, in order to determine the nature of the effusion. If it be pus, I shall simply evacuate it to-day, and see how rapidly the pleural cavity refills. If it be serum, I shall simply withdraw the fluid with the aspirator. The fluid which I have removed consists of serum containing a large amount of flaky material.

I shall now introduce the aspirating needle; but, as you see, only a little fluid escapes. This is due to the clogging of the tube with this flaky matter. This will break down into pus. It will be necessary on a future occasion to make a permanent opening. I shall withdraw the needle and insert it at a higher point, so as to get above these flakes, which have settled to the base of the chest. The liquid flows more freely now, and we shall be able to withdraw sufficient fluid to give a considerable temporary relief. As the hour has expired, I shall continue the as-

piration after the patient has been taken to the ward, and report to you the quantity removed.

TRANSLATIONS.

THE VIRUS OF GLANDERS.—M. Bouley read a report on the "Microbe of Glanders" before the Academy, in which he reviewed the evidence in favor of a particulate infection, and declared that experiment had demonstrated that this existed in the form of a bacillus, first recognized in the discharges by Christot and Kiener in 1868, and subsequently demonstrated by cultivation experiments and inoculations made by M. Bouchard in conjunction with MM. Capitan and Charvin. In discussing this communication, M. Colin declared himself not convinced by the proofs yet adduced in favor of a specific bacillus. He declared that the virus of glanders is very persistent, and that the discharges contained many other things besides microbes, which might convey the infection, such as organic detritus, lymph-globules, micrococci, etc. He believed that the only legitimate conclusion that could be drawn from the experiments is that culture-liquids are able to transmit the poison of glanders, but he saw no proof of a special microbe. He insisted that the culture-experiments should be increased to hundreds, in order to eliminate other possible sources of contagion. He had examined the blood of persons dying of glanders, without detecting the bacillus. —*Revue de Thérapeut. Méd.-Chir.*, November 15.

THE SUPRA-PUBIC OPERATION FOR LITHOTOMY.—In a discussion upon the high operation for the removal of stone from the bladder, at the Société de Chirurgie, while considering the report of a successful case by M. Desprès, M. Perier, from an experience based upon five operations, formulated the various steps for the operation, as follows:

1. Introduction of the tunnelled sound into the bladder, and discharge of the urine.
2. Application of an elastic ligature around the penis.
3. Introduction of the rubber balloon into the rectum.

4. Distention of the bladder by warm borated water.

5. Distention of the rectal balloon.

6. Free incision of the skin and subjacent tissue down to the vesical wall.

7. Opening of the bladder, keeping the incision gaping.

8. Extraction of the stone.

9. Depletion of the balloon, and withdrawal of the sound.

10. Examination of the vesical wall, and washing out the bladder.

11. Insertion of drainage-tubes.

12. Suturing the wound above the drainage-tubes, and dressing.

M. Perier attaches great importance to drainage, and to antiseptic washes of the bladder and the wound. He uses two tubes, side by side, through which the injections are made and the discharges and urine escape.—*Revue de Thérapeut.*, No. 22.

SUBCUTANEOUS RHEUMATIC NODOSITIES.—In a recent communication made to the Société Médicale des Hôpitaux, published in *Le Progrès Médical* (Nos. 47 and 48), M. E. Troisier calls attention to a rare and curious rheumatic manifestation,—subcutaneous nodosities which show themselves near the affected joints and along the tendons during an attack of articular rheumatism, or during convalescence, but which afterwards gradually disappear. Although Jaccoud has awarded to Froriep the credit of the first mention of these lesions, it is believed that the honor of first pointedly directing attention to them is due to Jaccoud himself, who described them under the title of *induration rhumatismale* in his classical work "*Traité de Pathologie Externe*," in which the clinical features are well delineated. These peculiar appearances are not of much significance, as the majority of them disappear in a few days; but their existence has been noticed by a number of observers.

EXPLANATION OF TOXIC EFFECTS OF IODOFORM.—In a contribution to the *Centralblatt für Chirurgie* (No. 48), Dr. G. Bouma, of Leyden, calls attention to the importance of examining all iodoform that is used for surgical purposes. Much of the drug found in the stores contains impurities, and from careful observation he is satisfied that the cases of iodoform-intoxication which have been reported from some clinics have been really due to

the adulteration of the drug. In the clinic to which he is attached in Leyden, all the iodoform used is tested, and only pure iodoform is used. One specimen, which contained eight per cent. of impurities, after having been rejected, was sold in another city, and the result was noticed that serious toxic symptoms appeared in one-half of the major operations, whereas in Prof. van Iterson's clinic at Leyden, out of over three hundred cases in which pure iodoform was employed, only two presented symptoms of delirium, etc., and one with fatal results. Both of these were resections of the superior maxilla, in which tampons of iodoform-gauze had been used. Dr. Bouma is of the opinion that if iodoform be kept for a length of time exposed to light and air it may acquire poisonous properties.

URETHRO-RECTAL FISTULE — DEATH FROM URÆMIA.—Under the care of M. Desprès, at La Charité, was a case of a young man, 29 years of age, who had urethral stricture, and also a urethro-rectal fistule, probably due to a false passage caused by the injudicious use of instruments. The patient was much prostrated, and had a subnormal temperature. A very small quantity of urine was discharged by the urethra, but he had a troublesome diarrhoea, urine being discharged into the rectum. He died of chronic uræmia, and, in addition to the above-mentioned lesions, at the autopsy there were found chronic cystitis with ulceration, and contracted kidneys.

HYOSCIN IN NIGHT-SWEATING OF PHTHISIS.—Fraentzel found in twenty-nine cases of profuse sweating in phthisis, after failure of atropia, that hyoscin hydriodide in doses of $\frac{1}{120}$ to $\frac{1}{64}$ of a grain (or .0005 to .001) reduced the sweating decidedly in ten, stopped it completely in five, and in the remainder had no special effect.—*Charité Annalen*, No. VIII., and *Centralblatt für Medicinischen Wissenschaften*.

THE TANNATE OF CANNABIN AS AN HYPNOTIC.—The use of the tannate of cannabin is reported in Germany as a soporific agent. Its high price, at present, prevents its common employment instead of the extract, to which it is preferable, as it is claimed to be free from *tétano-cannabine*, a toxic convulsive principle contained in the plant.—*Revue de Thérapeutique*, December 1.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 12, 1884.

EDITORIAL.

INCISION AND DRAINAGE IN PURULENT PERICARDITIS.

WITH regard to operative surgical interference in pyopericardium, most authorities agree in considering it a delicate and hazardous operation, to be undertaken as a last resort, and only by means of the aspirator or a fine trocar and canula.

This treatment by the use of an exploring trocar was recommended by Bamberger and Friedreich, with the subsequent injection of chlorine-water or iodine, or irrigation by detergent antiseptic solutions, and is referred to also by Fothergill, who regarded it as a forlorn hope, but thought it capable of yielding relief. The practice approved by F. T. Roberts is that of removal of the purulent collection by the aspirator; but he gives this recommendation with the warning that it should not be rashly practised. Bristowe, who approves of surgical interference in pericardial supuration, gives the details of the operation: the most eligible spot for puncture he considers to be one towards the inner extremity of the fourth or fifth interspace close to the sternum, and suggests that the tissues be divided with the scalpel, one by one, until the parietal layer of the pericardium is reached, and then to puncture carefully with a fine trocar and canula; believing it advisable also to wash out the cavity, he uses a weak solution of chlorinated soda or of potassium permanganate. The preliminary use of a fine aspirating* needle for diagnostic purposes is suggested.

Dr. Austin Flint, Sr., says that in suppurative pericarditis aspiration is always indicated, but he also states that if after repeated aspirations pus continues to reaccumulate,

it is very evident that a permanent opening into the pericardial cavity, with injections, affords the only hope of effecting a cure.

Dr. Samuel West, at a recent session of the Pathological Society of London, reported a case of purulent pericarditis treated by free incision, in a boy fourteen years of age: twenty-four ounces of pus were evacuated (*Medical Times and Gazette*, December 8, 1883). This makes the third case in which pericardium has been laid freely open for purulent pericarditis. Prof. Rosenstein reported the first case, of a boy whose pericardium had been opened and drained after it had been twice tapped, who recovered, in spite of a secondary attack of left-sided pleuritis. The second case had been under the care of Dr. Samuel West also; it was an idiopathic purulent pericarditis, in which the same treatment was followed by complete recovery. In the third case death occurred from other causes: the post-mortem showed a large abscess of the thigh; but the cavity of the pericardium had been nearly obliterated in the short space of two weeks. He expressed the opinion, in presenting this specimen for examination, that opening the pericardium is not a more hazardous proceeding than opening the pleura or the peritoneal cavity, if done with the same precautions.

BOTH BANE AND ANTIDOTE.

WITHIN a few days the coroner of Philadelphia has been called upon, in the course of his duties, to investigate the death of a man who, after drinking a quart of whiskey on a wager, died in consequence in the course of a few hours with acute alcohol-poisoning. This case is not cited for its rarity, because similar cases are already on record illustrating the toxic powers of alcohol, but it is mentioned in order to point out a possible danger in the treatment of a patient who has been bitten by a venomous reptile. Dr. H. H. Hulke,

in a recent communication to the *St. Louis Courier of Medicine*, urges the trial of quinine as a substitute for at least a part of the whiskey usually given to cases of snake-bite, and expresses the opinion that there can be little doubt that more persons are killed by the enormous amount of whiskey they drink, when bitten by a snake, than from the effects of the bite itself. A general recognition of alcohol as a toxic agent, capable by its own effects of destroying life when introduced into the system in immoderate amounts, will greatly assist the community in appreciating the fact that, in smaller amounts than those capable of promptly destroying life, it may, and generally does, exert injurious effects upon the human frame. If the false sentiment which accompanies the use of this agent could be corrected, the consumption of intoxicating alcoholic drinks would be enormously reduced.

HYDROPHOBIA AND THE CRITICS.

TWO articles relating to hydrophobia, or, more correctly, rabies canina, appear in our columns in this issue,—one containing Criticisms on the Specific Theory of Hydrophobia, the other a criticism upon this paper by a valued correspondent, who prefers to be impersonal, so that his arguments may stand for themselves and be taken at their worth. Both are able communications, and will be read with interest. We therefore regret that want of space compelled us to omit a part of the original paper, consisting principally, however, of quotations from authorities. An analysis of Dr. Dulles's paper shows evidences of great industry and patience in reviewing the literature of the disease. In the first place, he has collected a number of curious mistakes in diagnosis, and of erroneous observations, both ancient and modern, concerning the pathology of hydrophobia; and, secondly, he reports that neither his individual studies nor those of

other modern pathologists have succeeded in establishing any characteristic morbid anatomy belonging to rabies. The changes found in the brain and medulla had no pathological characters whatever, such as could be recognized as the lesions of the disease. Upon facts and observations such as these, gathered during two years' study of the subject, and given in his essay, the lecturer bases the remarkable opinion that "hydrophobia is not a specific, inoculable disease derived from the bite of a similarly affected animal." Unless the author attaches some peculiar meaning to the term "special," it would seem that his views cannot be harmonized with what is known clinically of rabies: they certainly are not the natural sequence of anything contained in his communication.

Our correspondent, in criticising this view, simply reaffirms what are considered as well-established facts with regard to the pathology of hydrophobia, and expresses some truths with regard to medical logic which can scarcely be too often repeated. We think that we can accept the statement that nothing characteristic has been observed regarding the pathology of hydrophobia; but we should hesitate before adopting the view that therefore such a specific disease does not exist. How long had typhoid fever existed before its characteristic lesions were recognized by Petit and by Louis? Was there no albuminuria before Bright discovered its dependence upon renal disease?

NOTES FROM SPECIAL CORRESPONDENTS.

COLUMBUS, OHIO.

EDITOR PHILADELPHIA MEDICAL TIMES:

THE Central Ohio Medical Society held its regular meeting in December. Dr. J. N. Beach presented a stomach somewhat dilated and with a large cancerous (?) deposit at the pyloric end. The walls at this point were over an inch in thickness, but the microscope had not been invoked to decide

between carcinoma and fibroid thickening. The history of the case was its noteworthy feature. Attention had first been drawn to the abdomen by the occurrence of ascites. After the withdrawal of a large amount of fluid, the tumor was discovered. Nevertheless, during the whole course of the disease, until death occurred from progressive emaciation, the patient had neither pain, vomiting, nor hemorrhage. The occurrence of disease without classical symptoms was further illustrated by the report of a case by Dr. H. G. Landis. A multipara was suddenly attacked by vomiting and diarrhoea, the latter soon ceasing spontaneously. She had menstruated regularly up to date, and at the time when seized was having a slight show at the proper time. She had no pain, not even tenderness on pressure, no interference with micturition, and yet examination a few days later revealed a gravid retroverted womb incarcerated in the pelvis and replaced with difficulty. Pregnancy had advanced to three months. The vomiting ceased after the liberation of the womb. The Stagyrite has declared that it is a part of probability that many improbable things will happen. This was illustrated by a case reported by Dr. T. W. Jones. A ten-year old child ate freely of raw oysters. During the following week symptoms of indigestion, with fever, were present, and the mother administered sundry vermifuges without effect. Dr. Jones, being called in ten days after the molluscous repast, gave calomel and rhubarb, but without present effect. Five days later, making *fifteen* days in all, he succeeded in bringing away a large stool, in which were at least twenty raw oysters, having an odor contracted from their recent habitation, but otherwise as good as new. The account was received with marks of incredulity, as evinced by a cross-fire of questioning, well borne by the venerable reporter, and further investigation was requested. After the meeting, Dr. J. F. Baldwin accompanied the doctor to the scene of action, and failed to find anything to disprove this remarkable fact. Dr. E. B. Pratt narrated the case of a bibulous shoemaker who during an attack of delirium tremens vomited many raw oysters which had been swallowed one week before. Those who have been relying upon the self-digestibility of raw oysters will now have to pause in their mad career long enough to bite into the animal's interior. At the afternoon session Dr. Warner, a candidate for membership, read a paper upon pleurisy, which had the desired effect. Dr. Kinsman illustrated one of Dr. Da Costa's sayings by reading a paper upon consumption, which was duly discussed. The scientific work being over, resolutions were read favoring the establishment of a State Board of Examiners, who shall have exclusive power to confer the right to practise medicine in the State, and who shall make a more thorough course of study obligatory. The

discussion was opened by Dr. H. J. Sharp. He spoke at length of the low estate of the profession, comparing it with that of Europe, and claiming that the legislation contemplated in the resolutions would give us a higher order of ability in the profession. The discussion continued in the same vein until Dr. Starling Loving called attention to a few points, especially with reference to medical colleges. He averred that the fault was less with the colleges than with the profession at large, who for a paltry fee will take any one into their offices and then send him to a college to be made into a physician. If no physician would admit into his office a student who has not a liberal education, the colleges would be supplied with proper material. Further discussion was postponed until the January meeting.

COLON.

CORRESPONDENCE.

A CRITICISM ON A PAPER ENTITLED "CRITICISMS ON THE SPECIFIC THEORY OF HYDROPHOBIA."

MR. EDITOR,—Argument will scarcely fail among men as long as there are doctrines to be accepted or attacked, but it seems scarcely worth while to spend much time in proving the existence of a disease that has been known so many years and presents such distinctive clinical features as hydrophobia, merely because some one denies its existence.

We are reminded that a little book, published some seventy years ago, was the cause of much amusement from the mistakes of others respecting its nature and object. At the present day it is looked upon and valued as a literary *jeu d'esprit*. The book referred to is Whately's "Historic Doubts relative to Napoleon Bonaparte," in which, arguing exactly as Hume has done in his Essay on Miracles, the author proves that the existence of Napoleon Bonaparte is, to say the least, quite doubtful.

When anything we are asked to believe is "passing strange," we rightly demand that the witnesses in the case shall possess the following most important qualifications: first, they must have the means of gaining correct information; secondly, they must have no interest in concealing truth or propagating falsehood; and, thirdly, they must agree in their testimony.

Those on whose testimony the existence and actions of Bonaparte—the most extraordinary figure in modern history—are generally believed, fail in all these essential points: we have no assurance that they had access to correct information, they had an apparent interest in propagating falsehoods, and they

palpably contradict each other on most important points.

Very many men readily believe, and on slight evidence, any story that pleases their imagination by its admirable and marvellous character. This hasty credulity is unworthy, however, of a philosophical mind, and in proportion to the strangeness of the account should we suspend our judgment and yield to none but the most decisive and unimpeachable proofs.

Some years ago, four medical men of large experience were dining in this country with Mr. Spencer Wells, when one of them was offered a peach. He declined it, and gave as his reason for so doing that he was afraid to eat one, lest it should bring on a paroxysm of ague. Mr. Wells was emphatic in his disbelief of there being any danger to be apprehended; but the three other medical men said they knew by experience that there was. The peach was eaten, and the paroxysm followed. Mr. Wells said afterwards, when referring to this consequence of peach-eating, that he never had had lockjaw to occur after his operations except in three cases, and their history was as follows. Operating for ovariectomy, he found he had no director. Mr. Henry Smith opened his pocket-case and gave him one. That patient died of lockjaw, and the next two died of lockjaw; and Mr. Wells added that Henry Smith was then Fergusson's assistant, that Fergusson had used that director, and Fergusson then had lockjaw in his practice. To the inquiry as to whether he believed that lockjaw could be carried and communicated from one patient to another, Mr. Wells answered only *that some things were very hard to explain.*

Now, just as the peach was eaten with misgiving, so we are sure that Mr. Wells, if he used the instrument at all after what he had witnessed, would do it with great reluctance, although he might not *believe* that lockjaw is carried on an instrument, and could give no satisfactory explanation of it if he did.

Now, it is worth bearing in mind that a thing may be true without our having any satisfactory explanation of it; and, on the other hand, an explanation of a thing may long be accepted as entirely satisfactory and yet not be true at all. When the system of Copernicus was first announced, it was declared that the earth could not be turning round on its axis; for in that case a stone let fall from the top of an eminence would come in contact with the ground at a distance to the west, *in the same way as a stone dropped from the top of a mast in a rapidly-sailing ship falls on the deck near to the stern.* An answer that was satisfactory for one hundred years was this: A stone, being a part of the earth, obeys the same laws and moves with it; it is not a part of the ship, and consequently its motion is independent. When the experiment was tried, a hundred years

after this explanation was accepted, the stone dropped from the mast-head fell at the foot.

An accepted explanation does not declare the truth of an assertion. Moreover, something may be true, and yet the explanation be incorrect,—be, indeed, most plainly absurd. The accounts given in ancient writers of earthquakes and volcanic eruptions can be admitted to be true, notwithstanding their being attributed to the violent efforts of imprisoned giants to effect their escape.

From the most ancient times certain diseases have been held to be *contagious*,—that is, to be communicable, preserving special characters, from a diseased person to a healthy one. As far back as the books of Moses, indeed, we see evidence of this. A satisfactory explanation of the cause of the contagiousness was not given until the time of Fracastor, who attributed it to a specific virus; and down to the present day it is universally admitted that there does exist in certain diseases a peculiar morbid product, called *virus*, which possesses the faculty of contagion, and the smallest quantity of which, under certain circumstances, is able to develop the same disease. Syphilis, smallpox, vaccine disease, have a virulent liquid, the existence of which no one can doubt at the present day. In rabies also there is one, how prepared in the salivary glands we know not. In scarlatina, measles, diphtheria, and cholera there is also a something by which the disease may be communicated; though what this is, whether bacillar or not, is not yet well determined. Certain atmospheric and other conditions have a very great influence upon the contagiousness of these diseases,—far more, certainly, than on those first mentioned. For all disease-germs are not alike, any more than are the seeds of plants or the ova of animals. Some vegetable-seeds must be planted in one season, some in another; some near to the surface of the ground, others more deeply; some need one soil, others a different one; and while some need a hot sun, others require shade and dampness. As to animals, what a difference exists between the requirements for the fecundation of the ova of fish, of frogs, and of mammals!

In his lectures upon diphtheria, Trousseau recalls such facts as these, and declares, emphatically, *that we ought to be very careful, very sober (très-sobres), in our reasonings against contagion.*

The disease known as hydrophobia—the hydrophobia communicated by the bite of a mad dog—is extraordinary. It is mainly so, however, be it noticed, on account of its horrible characters and its utter hopelessness; for there is nothing uncommon in the bite of an animal being followed by dangerous consequences from the introduction of a peculiar venom, nor is there anything unusual in a

poison acting on particular portions of the nervous system.

Were this disease, however, a thousand times more extraordinary, were it the sole instance known of fatal consequences resulting from an animal virus, we have abundant reason for not denying the fact of its existence from witnesses of whose qualifications, opportunities, and thorough disinterestedness there can be no question. They may, and of course they do, differ about treatment, and about the mode of action of the virus; some, unfortunately, class together under the general head of hydrophobia, cases where there is a simple horror of liquids, those of sympathetic hydrophobia, and those of spontaneous rabies, or rabiform hydrophobia together with those of true hydrophobia from the bite of a mad dog. All agree, however, in regard to the all-important point—the only one here in question—that there is a fearful disease communicated to man by the bite of a rabid animal. That every man who is bitten by a mad dog does not take hydrophobia is a matter of course, for, as remarked above, every seed requires certain conditions for its development; but that some do is a fact in regard to which there must be no question in the mind of a man willing and capable of reasoning correctly. Even if, with foolish reliance upon his own conclusions, a man should try the experiment of suffering himself to be bitten by a rabid animal, and no harm follow, this negative result would not invalidate the thousand positive results in the slightest degree. Everywhere and always—*ubique et semper*—this fact is known. Celsus, Morgagni, John Hunter, Dupuytren, Meade, Chomel, report to us this same fact. And at the present moment there are only too many able and ready to add to this testimony. No one, with such unexceptionable, such overwhelming evidence, must doubt *the facts*.

If any one should choose to uphold such a doctrine as that of the non-contagiousness of rabies as a literary mystification, as a *jeu d'esprit*, like the one of the Archbishop of Dublin referred to, both his judgment and his taste might be called in question. It may well be said that it is in the highest degree improper, for amusement's sake, to teach so dangerous a doctrine as this, that "no such disease as hydrophobia exists or can be caused by the bite of a dog under any circumstances." U. LYSSÉS.

THE PHILADELPHIA MEDICAL REGISTER AND DIRECTORY for 1884 is now preparing, in the hands of Dr. William B. Atkinson, Price, by subscription, \$1.00.

THE ALUMNI ASSOCIATION OF THE JEFFERSON MEDICAL COLLEGE will give an informal reception to Prof. Parvin on the 28th of this month, to which the resident alumni will be invited.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS.

A MEETING of the College of Physicians was held December 5, 1883, Dr. ALFRED STILLÉ, President, in the chair.

Dr. JOHN H. PACKARD read a report of a CASE OF ABDOMINAL TUMOR, SOMEWHAT RESEMBLING PREGNANCY, IN A YOUNG MARRIED WOMAN.

I venture to hope that the following report of a case presenting some unusual features may be of sufficient interest to warrant me in bringing it before the College:

Mrs. G., æt. 21, a very slim and delicate-looking woman, consulted me on the 21st of July in regard to a slight and uniform abdominal enlargement, which had been first noticed by her shortly after her marriage about three months previously, and had been gradually and steadily increasing. She menstruated regularly every month, and had had no nausea. Neither the breasts nor the nipples showed any change from the virgin state.

There was no tenderness at any point in the abdomen, and the appearance and feel of the swelling were very much such as would be presented in the early stages of pregnancy.

On the 26th I saw her again, and made an examination per vaginam. The os uteri was soft, and the cervix was of some length; but there was a bulging above, as if the uterus contained a mass partly solid and partly liquid. I did not, of course, think it right at this time to introduce a sound, as, in spite of the absence of rational signs, the presumption seemed to me to be in favor of pregnancy. One fact seemed to militate against this view,—viz., that she rather lost than gained flesh.

I declined to express any opinion as to the character of the swelling, but told the husband that my hope was that the case would prove to be one of pregnancy, as it was likely otherwise to be very grave.

There was a good deal of pain on either side of the hypogastrium, apparently due to tension of the muscles; this was temporarily relieved by the use of chloroform liniment. She had very little appetite, and I gave her a tonic composed of nux vomica and gentian.

The swelling continued to progress steadily, and on September 13 she presented the appearance of being at about the middle of the fifth month of gestation. The hypogastric pain troubled her greatly, and was only allayed for a very short time after each application of the liniment.

At the desire of the family, I now asked and obtained the advice of Dr. Ellwood Wilson, who saw her with me on September 15.

In the forty-eight hours which had elapsed between my previous visit and this one a very marked change had taken place. The abdomen had become greatly enlarged, its walls

forming one curve from the ensiform cartilage to the pubes; there was very decided fluctuation, and percussion showed an area of dulness which was attributed by Dr. Wilson to the existence of a cystic tumor connected either with the Fallopian tube or with the broad ligament. A sound was introduced into the uterus, the cavity of which was found to be unoccupied. Dr. Wilson advised the drawing off of the liquid, which was accordingly done, by aspiration, on the 17th. More than a gallon of ropy, yellow liquid, somewhat deeply tinged with blood, was thus removed; the flow then ceased, and the end of the canula encountered a solid substance, apparently a septum of considerable thickness. Upon the withdrawal of the instrument a fresh flow took place, the liquid spouting out from the orifice to a distance of several inches. When this subsided, the abdomen, which was much less tense, was covered with raw cotton, and a bandage carefully and firmly applied.

During the operation the patient became quite faint, but rallied after the administration of a little brandy-and-water. In the evening her temperature rose to 103.5° , but before morning it fell to about 100° . She slept very little, and complained of much pain, due partly to the stiffening of the cotton and bandage by the agglutination of some of the liquid which oozed from the belly. On examining the wound in the morning, it was found closed.

The following evening the temperature again rose to 103.5° , but subsided again before morning, and was not thereafter above 99° . Yet her condition was unsatisfactory: her face was much pinched and anxious; she had very little appetite or ability to take food; at times her mind wandered slightly, and she slept but little. Vomiting occurred frequently, and she was seldom free from nausea. Her bowels acted regularly; her urine was free, and normal in every respect. Her pulse varied, but was generally from 110 to 120.

Beef-tea, and milk, with brandy and lime-water and champagne, were given at as short intervals as the stomach could bear them, and at stated times. External warmth was carefully kept up.

It was determined that should symptoms of peritonitis present themselves, ovariectomy should be at once resorted to.

A portion of the liquid was submitted to Dr. H. F. Formad for examination, and his report, which was not received until some time after the case had terminated, was, "I think it very doubtful that it comes from an ovarian cyst, the fluid showing very little epithelium and very few of the ovarian cells of Drysdale."

September 23, her condition was very much more favorable; her mind was composed and even cheerful; her pulse and temperature were good. Some food had been taken and retained.

*

On the 24th her state was much the same, and it was thought proper to entertain the idea of an operation for the removal of the supposed ovarian tumor. In the afternoon Dr. Agnew saw her with Dr. Wilson and myself, and it was decided that the attempt should be made on the following day.

Accordingly, on the 25th, at noon, ether was administered by Dr. G. P. Sargent, of Bryn Mawr, and, in the presence of Drs. Wilson and Agnew, I opened the abdomen by an incision in the median line. After dividing the wall, I came to what seemed to be a cyst, and passed in an ovariectomy trocar, when a very free evacuation of liquid, straw-colored and ropy, but clear, took place. It was now apparent that the liquid was contained in the peritoneal cavity, and that there was a large solid mass lying among the intestines. This tumor was soft and doughy, like a placenta; it seemed to belong to the mesentery, since, although somewhat movable, it was firmly attached to the posterior wall of the abdomen, rather high up. The surface of the mass having been slightly lacerated, there was somewhat free bleeding, which was checked with some difficulty by ligation with carbolyzed catgut, and by the application of a cautery-iron.

The wound was now closed with two large pins and a ligature cast around them, and with metallic sutures; a sheet of raw cotton was applied over the whole belly, and secured by a bandage.

The patient rallied considerably, and, after the effects of the ether had passed off, became quite sensible; but she soon began to sink, and died on the 27th, about forty-eight hours after the operation.

No autopsy could be obtained, so that the exact nature and connections of the tumor must remain a matter of conjecture.

The notable points in the case now detailed seem to me to be the occurrence of a solid tumor, probably of malignant character, and apparently connected with the mesentery, in a young woman recently married; its resemblance in its physical appearances to the pregnant womb; the very sudden change that took place by a fresh effusion into the peritoneal cavity, and the obscurity which even then existed as to the real nature of the case. Even with the most accurate diagnosis, effective treatment would have been out of the question; and I cannot but think that my suspicion of pregnancy, erroneous as it proved to be, really prolonged the patient's life, which would have been almost necessarily sacrificed by earlier interference.

CRITICISMS ON THE SPECIFIC THEORY OF HYDROPHOBIA.

Dr. CHARLES W. DULLES read a communication upon hydrophobia, reaffirming the views expressed in a paper entitled "Remarks on Hydrophobia," which appeared in

the *Philadelphia Medical Times*, August 11, 1883. He stated that he was sure that the attitude of severe criticism seems to offer the only hope for the solution of the riddle of hydrophobia; since, in more than two thousand years, the acceptance and repetition of authoritative opinions have failed to furnish a theory which does not fly in the face of all analogy, or a practice which holds out a reasonable hope of saving a single life. Such is the real state of knowledge in regard to hydrophobia. The theories as to its nature are contradictory and illogical; the teachings as to its treatment are without the slightest hope of success. In regard to both, the ablest men who have discussed it occasionally or systematically are in irreconcilable opposition. While some hold to certain modes of communication, others strenuously deny them. While some admit its spontaneous origin, others will not admit it for a moment. While some think the virus is to be found in the saliva, the blood, the bronchial mucus, the milk, the flesh, of rabid animals, others limit it to the first of these alone. In regard to the period of incubation the widest divergence of opinion exists. The range is from one day to forty years, and no one seems to have been able to fix a limit to either its shortness or its length. Equal contradiction meets the gaze when one turns to the matter of treatment. [Here he cited a number of authorities, both ancient and modern, who offer the most varied and even absurd recommendations.]

These citations illustrate the most remarkable feature of the literature of hydrophobia. It would seem as if, when once the mind has accepted a theory which contradicts all experience in other and fairly well understood diseases, it loses the ability to distinguish good evidence from bad. A striking illustration of this is furnished by Dr. Dolan, in his otherwise capital book on "Hydrophobia or Rabies." In his second chapter this writer calls attention in detail to the rules laid down by Dr. Abercrombie in his "Inquiries Concerning the Intellectual Powers and the Investigation of Truth." These warn against the following fallacies: 1. Receiving as facts statements which are not facts, but opinions. 2. Receiving as facts statements which only assume the relation of facts. 3. Receiving as facts general statements, or the generalization of facts. Dr. Dolan then says, "Some writers, for instance, have maintained with much confidence that a particular state of rigidity of some of the limbs is distinctly characteristic of *ramollissement* of the brain. But further observation has shown that the disease may exist without this symptom, and that this condition of the limbs may appear in connection with other diseases. This observation of facts was in so far correct that this state of limbs does very often accompany *ramollissement* of the brain: the error

consisted in giving it as a general fact, or a fact applicable to all cases of *ramollissement*, which is without foundation. Yet such statements, when brought forward with confidence, are often received as facts and rested upon as established principles; and then the facts by which their fallacy might be detected are apt to be overlooked or forgotten." To this reference to the commonest sources of fallacy Dr. Dolan adds, "We are arming our readers against ourselves." And yet he goes on, apparently with his eyes wide open, to reproduce the fault he has just pointed out in speaking of *ramollissement*, accepting statements which ought not to be entertained for a moment in the discussion of so grave and delicate a subject, and admitting as genuine cases which are transparently spurious. Dr. Dulles then gave in detail the report of a case reported by Romberg. This case was declared not to be hydrophobia. He said that he had selected an illustration of the point which he wished to make which should include two names well known and justly distinguished, because their very excellences add force to the proof they furnish that the prepossession of a theory which at the outset demands a certain surrender of the judgment will impair the freedom of the judgment at every subsequent step. Such, it seemed to him, is the condition in which every believer in the specific nature of hydrophobia stands. The assumption of a specific virus, which, and which alone, is the originator of the disease in any individual, compels its adherents to bend their judgment to accept the belief that there is a virus which behaves in a way contradictory to that of every other virus about which we have any positive knowledge. As Lorinser has said (*Wien. Med. Wochenschrift*, 1874), "We know very well the appearances produced, for example, by the bite of poisonous serpents, or by the poisoning of wounds with the poison of glanders, anthrax, syphilis, or cadaveric poison. There are, in general, always the manifestations of more or less rapidly developed inflammation, and of further distribution of the poison through the lymphatics, veins, and lymphatic glands, which organs then, in like manner, manifest similar inflammatory symptoms. Nothing of the kind do we see in wounds made by the bites of mad dogs," etc. And, again, "We know, in all pathology, not a single infective disease which, in regard to the time and symptoms of development, bears the slightest resemblance to hydrophobia."

One might suppose that such a contradiction would lead observers to be constantly on the lookout to find some other way of explaining the phenomena of hydrophobia, and that everything that was presented as evidence in support of it would be subjected to the most rigid scrutiny. But the literature of the subject shows that the very opposite is the case. The *post hoc propter hoc* argument

is the one which rules here. A careful perusal of a large number of recorded cases leaves the impression that they have not been studied with any idea that they might be something else than what they appeared to be. Though it is no secret that the dread of water is a symptom of a great variety of affections, one finds over and over again the ablest men resting a diagnosis on this which is acknowledged by most systematic writers to be the least reliable of its signs. Another thing which had struck them in examining the records of cases is the readiness with which reporters, aware of the objection so often raised of the effect of mental influence, accept the statements of friends or the silence of patients in regard to it as evidence that it does not exist.

Another curious thing to be observed in the literature of hydrophobia is the way in which the madness of the dog is often—one might say usually—deduced from the diagnosis of hydrophobia in the man, instead of the diagnosis of hydrophobia being made to rest upon reliable evidence that the dog was really mad. It is uncommon to find any proof whatever that a dog to which hydrophobia is attributed was rabid, this being, with rare exceptions, a pure assumption. The one phenomenon of a dread of water usually determines the conviction of the physician that he has a case of hydrophobia before him, and settles his opinion of any dog that may ever have bitten the patient and cannot now be accounted for. Nay, more, this mode of reasoning has led certain writers to the assertion that there may be a passing state in dogs in which they may communicate to a human being hydrophobia, but themselves recover. Thus is the struggle to support the specific theory kept up when circumstances seem to be most adverse to it.

Once more, and I am done for this occasion with objections to the anomalies which one meets in examining the basis upon which the general belief in regard to hydrophobia rests. I find in the recorded cases—with very rare exceptions—that, when once hydrophobia is suspected, every phenomenon that occurs during life, every lesion that is found post mortem, is unhesitatingly set down as a feature of this disorder, and the idea does not seem to be entertained that many of them are grounds of suspicion that some other disorder is present. In this way all lines of distinction between hydrophobia and disorders which simulate it are erased, and it remains for every medical man who is called to a patient who has a dread of water, accompanied with exaltation of reflex excitability, to inquire for a bite or scratch of a dog or cat; if one cannot be drawn out, to assume that it has been received and forgotten, then to make a diagnosis of hydrophobia, after which it is only necessary for the patient to die to make a complete record. If to this be

added a careful microscopical examination of the state of the brain and spinal cord, the observer will have an exact counterpart of the process by which the famous conclusions of certain investigators—often quoted by those who have not taken the pains to go to the evidence upon which they are founded—were arrived at.

This suggests a brief consideration of the pathological lesions of hydrophobia. Notwithstanding all the diligent endeavors made to learn something from the post-mortem examination of the bodies of dogs and men that have died of rabies or hydrophobia, one might to-day adopt the language of Dr. Hart, who declares (Cooper's "Surgical Dictionary," art. "Hydrophobia") that these examinations afford "little else than a varied mass of symptoms, common to other nervous and blood disorders," and fail to "throw any clear light on the pathology of the disease."

I will not trouble you with the disappointed anticipations of the ancients in this connection; those of modern times are more instructive. The announcement by Hallier, in 1872, of the discovery of a micrococcus which was the germ of hydrophobia, and to which he gave the positive name of "lyssophyton," and the belief of Klebs in the parasitic nature of the granular elements found around the blood-vessels near the scar, have appeared and disappeared within the last decade. The hasty statement of Pasteur that he had obtained from the saliva of a patient dying of rabies a peculiar germ which, when he had cultivated it and inoculated the product, gave rise to a hitherto unknown disease, he was compelled to withdraw almost as soon as he had made it.*

The investigations of Benedikt, Coats, and Gowers are of the greatest interest in connection with this part of our subject. They are often spoken of as if their results were identical and conclusive, although, in fact, they are neither. Dr. Benedikt published his investigations in 1875 in *Virchow's Archiv*. The text is accompanied with a plate which leaves little room for misunderstanding the author's meaning. The lesions described and figured consist of a perivascular exudation or extravasation (or both) of red blood-corpuscles, miliary spots of finely granular degeneration of the brain-substance, "miliary abscesses," and melting down of effusions so as to make hyaline bodies alongside of the blood-vessels, often closing their lumen; while the vessels had a pigmented encasement (*Pigmenthülle*), made up of red blood-corpuscles. These lesions were found in both dogs and men. Dr. Coats published his discoveries in

* Nothing daunted by the experience of others, I observe that Dr. Paul Gibier reported to the Académie des Sciences of Paris, June 11, 1883, that he had found a special organism in the rachidian fluid of animals that had died of rabies, and that the virus could be attenuated by means of cold. Another of the conclusions he announced at that time was that the disease is communicable from mother to foetus.

the *Medico-Chirurgical Transactions* in 1878, accompanied also with plates. His investigations referred to tetanus and hydrophobia. He makes a point of the analogies between these two disorders, and, assuming a virus in hydrophobia, he argues backwards that there is a poison circulating in the blood in tetanus. The lesions he describes in hydrophobia consist of a perivascular infiltration with *white* blood-corpuscles.

In comparing these investigations, it is to be noted that the lesions Coats found in tetanus correspond much more closely with those Benedikt found in hydrophobia than do those the former found in his investigation of this latter disorder. Further, it is to be noted that he describes the perivascular infiltrate as consisting of *white* corpuscles, while Benedikt is clear in describing it as made up of *red* corpuscles. Finally, Coats does not consider (though most persons who refer to him speak as if he did) the lesions he found to be distinctive of hydrophobia, but simply evidence of irritation in the blood. Thus we see that these two investigators cannot be regarded as confirming each other.

Now, the association of the name of Dr. Gowers (whose investigations are described and illustrated in the *Transactions of the Pathological Society of London*, vol. xxviii., 1877) with those of Benedikt and Coats, as having found lesions pathognomonic of hydrophobia, is equally unwarranted, for he distinctly stated, in answer to a question at the meeting where he demonstrated his specimens (*Lancet*, June 9, 1877, p. 840), that his investigation did not lead him to believe there was any special lesion in hydrophobia.

But, inconclusive and conflicting as the results of all these careful investigations have been, it might be easy to see how they might be taken for more than they are worth, if it were not for the fact that they have been formally and categorically vitiated by the subsequent investigations of others. Thus, Middleton (*Journal of Anatomy and Physiology*, 1881) has published the results of microscopical examinations in which he found perivascular aggregations of round-cells in two cases of hydrophobia, corroborating some of the appearances described by Benedikt, but disagreeing with Coats and Kolesnikoff in essential points. But the most striking point of his publication lies in the fact that he found the same morbid appearances which were present in the cases of hydrophobia, in cases of purpura hæmorrhagica, diabetes, fracture of the skull, erysipelas, head-injury with hæmatoma, concussion of the brain with fracture of the spine, delirium tremens, peritonitis, tubercular meningitis, mental deficiency and excitement, hæmatoma, tetanus, and uræmia. His paper concludes with the distinct avowal that, "As regards the pathology of hydrophobia, it still remains true that nothing characteristic has been observed."

Another investigator, who has gone over this ground, and come to conclusions as destructive as those of Middleton, is Ivanoff, who says (*London Medical Record*, March 15, 1883, from *Vratch*, 1882, No. 15) that similar appearances to those observed by Benedikt, Gowers, and others are found in typhoid fever. One of the supposed characteristics, the transparent spaces, he says, was found by Popoff and Stephanoff in uræmia, and by Vinogradoff in intermittent fever, by Danillo in phosphorus-poisoning, and by himself and Dr. Czorkov in the brains of healthy dogs. They have no pathological character whatever.

But I need not detain you with further references to more or less famous investigations. I will only add that they all tend to confirm the opinion that as yet no gross or microscopical lesion has been discovered which can be regarded as pathognomonic of rabies or hydrophobia.

And now I must close. I have not said so much because it is any pleasanter or is likely to be any easier for me than for others to differ from the majority in the branch of science to which my life is given. It is with shrinking that I take a position which, if it is deemed worthy of notice, will be apt to excite opposition, perhaps condemnation. But I have now been engaged for nearly two years in a laborious study of the evidences upon which the general belief in regard to hydrophobia rests, and I have been gradually led to certain convictions different from those with which I started, and which I feel it my duty to make public. One of these is that hydrophobia is not a specific, inoculable disease, derived from the bite of a similarly affected animal. Another is that if we wish to have an accurate, scientific knowledge of what too often actually takes place, and is usually called hydrophobia, we must begin the study of it unprejudiced by the views heretofore generally entertained in regard to it, and with canons of criticism very different from those heretofore deemed sufficient.

I know that these convictions are not novel, and that they have been stated and defended with arguments before. I know, too, that they have heretofore failed to secure the assent of the greatest men who in every generation have adorned the profession of medicine. None the less, however, do I believe them to be true, and that the time will come when they will not be—as they have been in the past—characterized as too absurd to be discussed, or decried as too dangerous to be tolerated.

But, however that may be, a sense of duty compels me to join myself to the small minority whom I think to be on the right side of the question, for truth's sake. Further, in this matter, the interests of science are in an urgent sense the interests of humanity. For this reason one who feels strongly must speak boldly. This, then, is

my apology to those who may think I have erred in opposing the opinion of so many men deservedly honored and respected in our profession.

THE ANNUAL REPORT OF THE LIBRARY COMMITTEE

showed that there have been added to the library this year 2186 volumes, 2107 pamphlets, and 2862 numbers of journals.

The total number of volumes now in the library is 26,359. For the ensuing year, the library will be kept open, except on Sundays and legal holidays, from ten o'clock A.M. to five P.M.

There are in the collection 3381 duplicates; and particular attention was called to this fact, inasmuch as it affords a rare opportunity to other libraries of augmenting their list at comparatively small expense.

THE REPORT OF THE COMMITTEE ON THE DIRECTORY FOR NURSES

showed that the number of nurses registered

December 1, 1882, was	209
Added during the year	104
Lost by striking from roll	6
Lost by withdrawal	4
Net gain	94

Present number	303
Total number of nurses furnished during the year, 733,—an average per month of 61, as against 49 for last year.	
Largest number (February)	84
Smallest number (August)	34
Sent outside of the city, but within the State	63
Sent to other States	59
Wet-nurses furnished	17
Of registered nurses, there are males	39
“ “ “ “ females	264
Graduates of training-schools	60
Non-graduates	243

The amount given to the library during the last year was two hundred dollars, and for the present year three hundred dollars. Many physicians take great trouble and waste much valuable time in hunting up nurses personally; or, having obtained a good nurse through the Directory, they transfer her from one patient to another directly, instead of through the Directory. Were they to use the Directory, they would obtain the *same* nurses, and add to the income of the Directory, and so to the appropriation to the Library.

It is the desire of the committee to make the Directory also a bureau for all needed information for the sick; and they have in contemplation measures by which, if any one desires to obtain boarding in the country or at the sea-side for cases of whooping-cough, or for recent cases of measles, scarlet fever, or diphtheria, and for information concerning

all appliances of the sick, such as invalid-chairs, wheel and other crutches, bed-rests, fracture-, water-, or air-beds, etc., he may obtain the object he seeks at the Directory.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, December 13, 1883.

DR. J. H. MUSSER in the chair.

Specimen of enormous hypertrophy of the heart. Presented by CHARLES W. DULLES, M.D.

THE patient from whom this specimen was obtained was a young man, 18 years of age, who came under my care in February, 1882, in an attack of muscular rheumatism, principally affecting the shoulders. I found at that time great oppression of breathing, a heart dilated and hypertrophied, with a harsh, strong mitral systolic and presystolic murmur.

Subsequently, albuminuria and general dropsy appeared, with effusion into the abdomen and thorax, and he died with œdema of the lungs.

The autopsy was made with the assistance of Dr. FORMAD and Dr. J. H. MUSSER. The points of interest were as follows. General œdema of feet and legs, the face and neck and chest covered with purpura-like spots and patches. The abdomen contained about two quarts of clear serum; each pleural cavity nearly as much. The lungs were normal, but small, and occupied the upper part of the chest. They were quite œdematous. The liver was slightly fatty. The spleen was of normal size, but very hard and tough. The kidneys were large, congenitally lobulated, and in a state of cyanotic hypertrophy.

The heart was enormously hypertrophied, weighing, when all the adherent parts were removed, forty-eight ounces. The pericardium was so uniformly attached to it that it could not be removed, and there was absolutely no pericardial cavity. The right ventricle contained about six ounces, the left side about two, of soft post-mortem clot. After the heart had been opened and washed, it weighed forty ounces. All the valves and blood-vessels were healthy. The tricuspid and aortic valves were quite competent. The mitral orifice was enormous, measuring two and a half inches across. Every part of the heart was hypertrophied, and all to about the same degree. The whole organ was about the size of that of a bullock.

The points of interest in this case—aside from the curiousness of the specimen—seem to be the comparative immunity of the kidneys, the absence of the physical signs of adherent pericardium during life, the benefit derived from the use of iodide of potash, the temporary disappearance of the very strong

mitral systolic and presystolic murmur, and the parotid swelling following the hypodermic injection of pilocarpine in the arm of the same side.

Dr. J. H. MUSSER, during life, had marked out on the chest the dimensions of the heart, and made it out as enormous, extending especially to the right. Furthermore, he thought that there was a double mitral murmur. The only apparent cause for the hypertrophy was the adherent pericardium. He would like to know what Dr. Henry thought of the correctness of this explanation.

Dr. F. P. HENRY said that the heart presented was remarkable not only for its enormous size, but also for the absence of the usual causes of cardiac hypertrophy, there being neither valvular disease nor obstruction in any part of the circulation. During his student days he had seen some very large hearts in the collection which Prof. Alonzo Clarke was accustomed to show to his class, but he would not trust his memory so far as to affirm that any one of them was as large as the one just shown.

Dr. MACCONNELL had seen a case in a member of the Modjeska troupe, where post-mortem examination showed an enormously hypertrophied heart with adherent pericardium, and markedly granular kidneys. In this case the hypertrophy was clearly due to the kidney-trouble.

Dr. FORMAD said that Dr. Robinson, of New York, had recently reported a case of hypertrophied heart weighing fifty-six ounces, but Dr. Dulles's specimen was weighed after removal of clots.

Dr. MUSSER asked whether other members of the patient's family had not hypertrophied hearts without valvular lesions. If such was the case, taking into consideration the age of the patient, it would be well to consider the probability of the hypertrophy being in part secondary to the pericardial adhesions, in part idiopathic in origin.

Dr. DULLES said that there was a tendency to hypertrophy of the heart in one sister, and that the murmur at times was double.

Calcified pericardium—Double mitral disease.

Ella S., white, æt. 23, was admitted to the University Hospital complaining of palpitation and dyspnoea, and suffering from an œdematous and eczematous condition of the lower extremities. She died three weeks after admission, in a fit of dyspnoea.

Autopsy, seven hours after death.—General dropsy, most marked in the lower extremities and genitals. On the lower part of the abdomen there is a marked varicose condition of the cutaneous lymphatics. The cavity of the pericardium was completely obliterated by adhesions. The two pericardial surfaces, and the fibrous tissue connecting them, had been changed into a calcareous plate three inches broad, completely encircling about its middle

the heart, with the exception of a space one inch wide on the posterior surface of the left ventricle. This calcified condition extended for one inch on the anterior surface of the pulmonary artery. The heart, with the calcified pericardium, weighed twenty-eight ounces. The auricles were dilated, their walls thinned. The ventricles were dilated, their walls thickened and undergoing fatty degeneration. The leaflets of the mitral valve were thickened and rigid; the mitral orifice was very decidedly narrowed. In the inner surface of the left auricle were several calcareous patches. The aorta was very small, scarcely admitting the index finger, and showed patches of atheroma. The lungs were chronically congested and œdematous, the condition being most marked on the left. There was no breaking down of their substance. The abdomen contained five gallons of straw-colored serum. The peritoneum was thickened and roughened. The liver weighed three and one-half pounds, and was cirrhotic. Its capsule was much thickened, and adherent to surrounding structures. The mucous membrane of the stomach was mammillated and thickened. The kidneys showed cyanotic induration.

Section of fibroma mammae. Presented by Dr. W. G. MACCONNELL for Prof. PANCOAST.

The patient was 22 years of age, and the growth was of seven months' duration. Fibromata of the breast are very frequently found, although some English authorities consider them to be of rare occurrence. They have been variously described under different names by writers. Birkett considers them a form of adenoma; Broca, adenoma with predominance of stroma, etc. This tumor was of an ovoid shape, firm and elastic, and on section presented a maroon-colored tissue, which, under the microscope, is seen to be composed of dense bundles of mature fibrous tissue, with but few nuclei. In some portions bands of wavy connective tissue are seen. The epithelial elements of the acini are hyperplastic.

Section of large spindle-celled sarcoma of lower jaw. Exhibited by Dr. W. G. MACCONNELL for Prof. PANCOAST.

The patient was a man, æt. 24 years. The growth had existed for about three years. The egg-shell crackle was readily elicited, the growth being of central origin. On section it presented a whitish appearance, and was traversed by spicula of bone.

Liver of chicken with tubercular growths. Exhibited by Dr. W. G. MACCONNELL.

The microscope clearly proved the nature of the growths.

Dr. FORMAD had seen four or five similar cases in the chicken, and two in the turkey,

in all of which he had detected tubercle-bacilli.

Dr. BARTON was much interested in two of the specimens presented by Dr. MacConnell. He was much surprised as to the nature of the tumor of the jaw, in that it was a spindle-celled and not a giant-celled sarcoma. Its site and duration would clinically have clearly indicated one of the myeloid variety. The sections of the mammary growth differed from those examined by him, in that in adeno-fibroma the glandular elements were more evenly distributed, whereas this section reminded him of his former studies of an elderly normal gland. Such large tracts are found without any traces of gland-tissue, whereas in all adeno-fibromas examined by him the adenomatous and fibrous elements were relatively more evenly distributed, giving the idea of the neogenesis of both, and not the atrophy of one and the proliferation of the other.

NEW YORK COUNTY MEDICAL SOCIETY.

A CALLED meeting was held December 21, 1883, S. O. VAN DER POEL, M.D., President, in the chair.

Dr. H. J. GARRIGUES read a paper on

PREVENTION OF PUERPERAL INFECTION.

The author stated at the opening of his paper that he wished simply to lay before the profession the means by which he had succeeded in freeing the Maternity wards at the Charity Hospital of puerperal fever, leaving out of consideration all theorizing regarding the nature of puerperal fever. Brief allusion was made to the history of antiseptics in obstetrical practice. Dr. Garrigues himself has so far adopted Listerism in midwifery practice, during the past eight years, as to make it a habit to wash the hands and instruments in a carbolic-acid solution, to make vaginal injections twice daily during the first week after delivery, and to wash out the uterus when indicated either as a prophylactic or a curative measure. He carried this plan with him on becoming one of the physicians to the Maternity Hospital. While this hospital has a special board of physicians, it is not an entirely separate institution, but a part of the Charity general hospital; and everybody knows how great the mortality usually is among lying-in women in a general hospital. The following statistics for the Maternity Hospital were read:

	Number of Deliveries.	Deaths.
1875	570	15
1876	536	20
1877	480	32
1878	225	7
1879	254	11
1880	149	8
1881	382	9
1882	431	14

While some of the deaths were attributable to diseases for which the hospital was not responsible, yet the great majority were the effect of hospitalism. During the first nine months of the present year the number of deliveries had been three hundred and forty-five, with thirty deaths. During the first three months of this year, while the author was on duty, the number of deliveries was one hundred and eight, the mortality eleven. Before a recent date it was the exception rather than the rule to see a perfect lying-in period. During six months from October 1, 1882, to March 1, 1883, there were one hundred and ninety-two women delivered, forty-six of whom were seriously sick, thirty-nine with inflammatory puerperal disease. When the author went on duty, October 1 of the present year, the condition of the hospital was at its worst: nine women had died during the preceding month, and half a dozen sick were left over from the preceding service, one of them dying later. In the mean time, bichloride of mercury began to be praised in surgical and obstetrical practice, and he therefore made use of it in the Maternity Hospital. But, not trusting entirely to the virtue of a newly-introduced drug, he adopted several other measures, all of which may have contributed somewhat to the excellent results obtained. At the hospital there are two large wards and one smaller for patients, a delivery-room, a large ward and two tents for the sick. Certain improvements were made in the condition of the wards, and when empty they were thoroughly fumigated with sulphur fumes, the windows then left open day and night, the floors and furniture scrubbed with soap and water, and bichloride of mercury used. The bedclothes were changed. In all the wards large demijohns were placed, filled with bichloride solution (1 to 1000), for use in washing the hands, making injections, etc. It can be used hot or cold, according to indications. When the patient was brought to the delivery-room she was given an enema, and the genitals, the buttocks, and the thighs were washed carefully with a lukewarm solution of the bichloride (1 to 2000). At least two quarts were injected into the vagina by means of the fountain-syringe. The fountain syringe consisted of a glass bucket, a long rubber tube, a straight glass tube for vaginal injections, and a curved one for intra-uterine injections when needed. The tubes were perforated at the end, and there were a number of perforations on the stem near the extremity. In cases of tedious labor, the vaginal injection was repeated every three hours. The rubber sheet covering the delivery-bed was washed with the antiseptic solution just before delivery. In order to limit the danger of infection by examination as much as possible, none of the nurses were allowed to make examinations except the one in charge of the waiting-ward and the head nurse in

the pavilion; and these not to do so oftener than necessary to notify the doctor. The latter was requested not to introduce the finger into the womb, but to be satisfied with an abdominal examination and an examination of the os externum. His hands were to be washed in the bichloride solution, soap and nail-brush to be used. The hands were to be held in the solution a minute or more each time the genital organs were approached. If the hands or instruments were to be introduced into the womb, glycerin was used with the bichloride of mercury (1 to 2000). This was preferred to carbolized oil, as the glycerin itself contained antiseptic properties, which were enhanced by the addition of the bichloride. When the head appeared at the vulva, a piece of lint, soaked in the bichloride solution, was applied, and kept there, for the prevention of the entrance of contaminated air to the vagina. After the expulsion of the child, the genitals were kept covered with a similar compress. The placenta should be expressed, if possible avoiding the introduction of the hand into the vagina. If the hand were introduced, the vagina should afterwards be washed out with the antiseptic solution; otherwise not. On the same principle, intra-uterine injections were employed only when the hands or instruments were introduced, or on the birth of a macerated child. But he never allowed any of the membranes to remain in the womb. The introduction of the entire hand into that organ gives rise to very little danger compared with that of hemorrhage and septicæmia, which are liable to develop if part of the membranes be left behind. In such cases, the intra-uterine injection was given immediately after the removal of the secundines, from two to six quarts of a hot solution being employed. In case of symptoms pointing to possible affection of the uterus, a speculum was inserted, and a careful examination made of the vagina and cervix before proceeding with the uterine injection.

In a case of normal labor the patient was washed with the antiseptic solution. A piece of lint, six inches wide and eight long, folded lengthwise so as to be three inches wide, was placed over the vulva. Outside of that was placed a piece of oiled muslin nine inches long and four inches wide. Outside of that still, came a large pad of oakum; and finally the whole was fastened to a bandage in front and behind by a piece of muslin eighteen inches square and folded together so as to form a kind of boat, pinned in front and behind at each of its corners. This dressing was renewed four times in the twenty-four hours. At the same time the genitals were washed with the bichloride solution. The floor of the ward was sprinkled four times a day with the undiluted solution. In order to prevent infection through visitors, the patient was not allowed to see any person while in

the pavilion, unless death were imminent, when a clergyman was admitted. The doctors and nurses in attendance were not allowed to go into the general wards or into the dead-house.

The instruments were kept in a five-per-cent. solution of carbolic acid, the bichloride being injurious to metal. The patients sometimes complained of a little smarting from the bichloride, and in one case it seemed to produce a slight eruption, which, however, was easily controlled by glycerin. In no case had there been any general symptoms attributable to the mercury. The dressings were continued as long as the patients were in the convalescent ward. They were usually discharged between the tenth and the fifteenth day.

The result of adopting this plan of treatment had been wonderful. As if by magic, all trouble had disappeared from the hospital. Ninety-seven women had been delivered since its introduction, and not only had none died, but there had scarcely been any sickness among them. There had been no trace of diphtheritic inflammation, by which they formerly had been persecuted. Where they used to have offensive odors, feverish and despairing patients, overworked nurses and doctors, the air is now pure, the patients look well, the temperature is normal, the nurses are cheerful, and the doctors happy.

The bichloride has certain advantages over carbolic acid: first, it is a much more reliable disinfectant; second, it is not only free from odor, but it is in addition an excellent deodorizer; third, it affects the skin less; fourth, it is more economical.

DISCUSSION.

The paper being open for discussion, Dr. MURRAY said that he was extremely interested in the paper, as he was Dr. Garrigues's immediate predecessor in the service at the Maternity Hospital, and had witnessed the ravages of puerperal diseases among the patients there. During the three months preceding Dr. Garrigues's last term of service ninety-six women were delivered, fourteen of whom died, eight of puerperal disease. Puerperal fever, as it existed in this hospital, was not like that usually described in text-books: it was more like that which reigned in Bellevue Hospital some years ago. There was a good deal of puerperal diphtheria, usually commencing at the vulva and extending up the vagina, but seldom affecting the uterus. It was usually ushered in with mild symptoms, as a small and frequent pulse, without marked chill, and slight rise of temperature. After the first few days the temperature was liable to become intermittent, being in the morning perhaps 101° F. and in the afternoon 102.5° F. The vulva, being exposed, would show a slight blush, which gradually deepened, and in the course of from one to three days lacerations

OLEATES.

These preparations are salts formed by the union of oleic acid with the respective bases indicated. They are designed for external application, and owe their superiority to the well-known penetrative property of oleic acid. Their medicinal action is entirely dependent on their bases, which are quite readily introduced into the circulation when applied epidermically in this form. As a means of securing the constitutional effects of these bases, their application in the form of the oleates offers many advantages, which will be readily appreciated, especially in the treatment of children and in cases of irritability of the stomach.

Although the advantages to be derived from the combination of bases with oleic acid were recognized as early as 1872, the use of these compounds has not become general, and principally because of defects in the pharmaceutical preparation, the original crude method of their preparation not having been improved upon. Within the past year Dr. J. V. Shoemaker, of Philadelphia, has made the subject of the oleates one of especial study and experiment, both from a pharmaceutical and a clinical standpoint. The result has been the production of a number of very eligible compounds, and the discovery of therapeutic properties hitherto unrecognized. We have secured from Dr. Shoemaker full information touching his methods, and are now prepared to furnish oleates of the following metals, which have been found of great value in the affections indicated:

ALUMINIUM.—A valuable astringent, serviceable in eczema, and as a dressing for burns.

ARSENIC.—This preparation contains twenty (20) grains of oleate of arsenic to the ounce, and is employed as a caustic in the treatment of lupus, epithelioma, etc.

BISMUTH.—An excellent emollient application.

COPPER.—For the treatment of ringworm, etc.

IRON.—Readily soluble in the fats, and use-

ful both as a local astringent and as a general tonic.

MERCURY.—Useful as a discutient to inflammatory exudates, and for the constitutional effect of the metal.

LEAD.—A cleanly and efficient substitute for Hebra's Diachylon Ointment.

SILVER.—An excellent application in pruritus and in erysipelas.

ZINC.—An impalpable powder, and of great value in intertrigo (chafing).

OLEATES OF ALKALOIDS.

OUR LIST OF THESE COMPRISES:

Aconitine (2 per cent. of the alkaloid).

Atropine (2 per cent. of the alkaloid).

Morphine (10 per cent. of the alkaloid).

Morphine and Mercury (5 per cent. morphine and 20 per cent. mercuric oxide).

Quinine (25 per cent. of the alkaloid).

Strychnine (2 per cent. of the alkaloid).

Veratrine (10 per cent. of the alkaloid).

OINTMENTS OF OLEATES.

These contain the several metals mentioned above. They are much more cleanly than ointments as ordinarily prepared, and for all the properties of ointments are much to be preferred.

Circulars fully descriptive of the above, and such other information touching the therapy of the oleates as has appeared, will be furnished gratis on application.

PARKE, DAVIS & CO.,

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60 Maiden Lane and 21 Liberty Street.

DETROIT, MICH.

BOUDAULT'S PEPSINE.

The only Pepsine used in the Hospitals of Paris for the last 30 years.

Unlike the various substitutes which, in some cases, are but unscientific or incompatible compounds, forced upon the Medical Profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be almost useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the Profession, and is therefore especially worthy of their attention.

With a view of bringing this important remedy within the reach of all, *the price has been materially reduced.* It is now not only the best, but comparatively the cheapest.

In answer to frequent calls, another preparation is now offered,

BOUDAULT'S SACCHARATED PEPSINE,

having the same high digestive power as the amylaceous; it will be sent only when specified.

Boudault's Pepsine is sold in bottles of 1 ounce, with a measure containing exactly 5 grains; also in bottles of 4, 8, and 16 ounces for dispensing.

Boudault's Saccharated Pepsine is sold in bottles of 1, 4, 8, and 16 ounces for dispensing.

Besides Boudault's Pepsine in powder, we offer also

BOUDAULT'S WINE OF PEPSINE.

In this preparation the taste of Pepsine being perfectly disguised, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder.

DR. RABUTEAU'S

(Lauréate of the Institute of France)

DRAGEES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that *Dr. Rabuteau's Dragees, Elixir, and Syrup* regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules*.

"The ferruginous preparations of *Dr. Rabuteau* do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hôpitaux*.

Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragees; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragees will be sent free to any physician mentioning THE MEDICAL TIMES.

Prepared by CLIN & CO., Pharmacists, Paris. E. FOUGERA & CO., Agents for the United States.

TANRET'S PELLETTIERINE

FOR THE TREATMENT OF TAPE-WORM (*TENIA SOLIUM*).

This New Tæniacuge, the active alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (*Tænia Solium*). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Dujardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and, if certain preliminaries are observed, success will be insured. Pelletierine is prepared by

M. CHAS. TANRET, Pharmacien de 1re Classe, 64, Rue Basse du Rempart, Paris.

DUCRO'S ALIMENTARY ELIXIR,

A COMBINATION UNITING THE PROPERTIES OF

ALCOHOLIC STIMULANTS AND RAW MEAT.

This preparation, which has been used with great success in the hospitals of Paris since 1863, is adapted to the treatment of all diseases requiring the administration, in a small volume, of a tonic able to stimulate and support the vital forces, as *Pulmonary Phthisis, Depression and Nervous Debility, Adynamia, Malarious Cachexia, etc.*

Prepared by EMILE DURIEZ & CO., Successors to DUCRO & CIE., Paris.

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would be found covered with a grayish membrane. Typhoid symptoms then developed. Different modes of treatment had been resorted to. Carbolic acid had been used extensively; he had used it almost to the extent, in some instances, of producing actual cauterization; yet as soon as the slight coating which it caused separated, the diphtheritic process seemed to develop even in greater severity. He thought that the mortality-rate at the Maternity Hospital had been greater from the fact that certain of the wards had formerly become thoroughly septicized before being used for confinement purposes.

Dr. W. GILL WYLIE said that about six months ago he read a paper before the Society, in which he advocated certain prophylactic antiseptic measures in cases of labor, and since the adoption of this method he had had but a single case in which there was a rise of temperature. It was a case for the use of forceps, and the temperature rose but slightly. He referred to a case which illustrated the necessity of free uterine drainage in puerperal fever, especially after abortion. If necessary, the drainage-tube should be introduced.

Dr. W. R. GILLETTE, who had been physician to the Maternity Hospital for about twelve years, thought that there could be no question in the minds of any present as to the importance of all the suggestions which had been mentioned by the author for the prevention of the development and spread of puerperal fever in the Maternity service. There might be some discussion, however, as to the methods to be employed, although he thought we need not dwell particularly upon these. The bichloride of mercury being the latest disinfectant, he supposed he would have to bow to it and accept it; but it was doubtful whether it ought entirely to supplant others which had stood the test of time. He himself, however, had not used the bichloride. With regard to the dressings employed, he could, perhaps, see benefit in the external dressing, but he could not understand how the compress of oakum and lint, the ordinary Lister dressing, could be of special benefit to the woman in the lying-in hospital, for she moved about in bed, and the dressing could not be kept in close apposition, preventing the entrance of germs from the air. Dr. Gillette referred to the death-rate among the parturients in Bellevue Hospital just before that service was transferred to the Maternity. It had been very great indeed, but so soon as the patients were transferred to the Island, at the Maternity Hospital, into perfectly clean wards, the mortality was reduced almost to a minimum. He believed that the secret of success in lying-in institutions lay in strict cleanliness.

Dr. A. S. HUNTER was quite in accord with the views expressed by the author regarding cleanliness and the use of antiseptics. He

believed, with Dr. Gillette, that the external pad presented by Dr. Garrigues would not succeed in keeping out the germs contained in the atmosphere. He preferred Lyman's silver tube for making intra-uterine injections. He also preferred the Davidson syringe to the fountain syringe, as with it the water could be thrown in in jets. He believed that antiseptic methods could be carried out with ease, even in detail, in obstetrical practice. He used intra-uterine injections only when there was special indication therefor, as in septicæmia. A napkin wrung out of the antiseptic solution and placed over the genitals was sufficient.

Dr. SIMON BARUCH offered his unqualified condemnation of the practice of antiseptic injections after normal labor and for prophylactic purposes. Out of nine hundred cases of midwifery he had seen but one death preceded by febrile symptoms, but since commencing the use of antiseptic vaginal injections after labor he had seen quite a number. He quoted statistics by German authorities who had given the method a thorough trial, and they went to show that much better results were obtained by simple attention to cleanliness, without any disturbance of the patient by injections or otherwise. The danger of removing clots and opening up the mouths of vessels to absorb poisonous matter, of injecting the fluid directly into the sinuses, of injuring the lining membrane of the genital tract, of forcing the fluid into the peritoneal cavity, etc.,—these were all dangers attending injections, as had been shown by actual experience.

The paper was further discussed by Dr. F. V. WHITE, Dr. GERRISH, and Dr. J. C. PETERS, and the discussion was closed by the author.

NEW YORK PATHOLOGICAL SOCIETY.

A REGULAR meeting was held December 26, 1883, GEORGE F. SHRADY, M.D., President, in the chair.

DILATATION OF THE STOMACH.

Dr. JOHN C. PETERS related a case of enormous distention of the stomach, occurring in a female, who had become much emaciated, and was in the habit, after retaining her food for two or three days, of throwing it up by the basinful. It was vomited in a fairly well digested condition. A small tumor could be felt, supposed to be located near the pyloric orifice, and believed to be the cause of obstruction to the farther passage of the food. The œsophageal tube was not introduced, the patient's low condition not permitting. She complained of great discomfort on being turned from side to side. He had seen a similar condition in two other cases, each of them females, and in each there being a tumor.

Dr. VAN GIESON recalled a case in which the stomach was so greatly distended that its outlines were recognized at the ensiform cartilage and symphysis pubis. Dr. Flint believed distention to be due to stricture of the intestine, but the autopsy showed no other cause than probable paralysis. The patient had become greatly emaciated.

Dr. R. W. AMIDON had seen three cases of supposed dilatation of the stomach, and he was unable to withdraw anything through the stomach-pump except some mucus. He also referred to a case which suggested the question whether floating kidney was usually attended by albuminuria.

Dr. G. L. PEABODY replied that he had examined something like three thousand kidneys at autopsy, and had not seen a single case in which he could say that there was truly a floating kidney. He was therefore inclined to think that some mistake had been made in the comparatively numerous examples of floating kidney so diagnosticated of late. At any rate, there is not a sufficiently large number of authenticated cases to enable us to draw any general conclusions as to the condition of the urine.

ENDARTERITIS OBLITERANS IN EPITHELIOMA.

Dr. G. L. PEABODY presented a penis, together with a microscopical section, in a case which was specially interesting as being a good illustration of the condition called endarteritis obliterans. The patient was a man 71 years of age, who first noticed a pimple on the frænum, which went on to develop into ulcerative epithelioma, necessitating amputation of the organ. A microscopical section showed connective-tissue development in the intima of the blood-vessels, as seen in cases of endarteritis obliterans in the brain. Dr. Peabody had seen the condition as frequently in non-syphilitic as in syphilitic subjects, and in different parts of the body, occurring in chronic phthisis and chronic nephritis, as well as in epithelioma.

MILIARY ABSCESES OF THE KIDNEYS.

Dr. BEVERLY ROBINSON presented a specimen, obtained from a woman, a domestic, who died in the Charity Hospital. She was admitted August 31, 1883, in a condition of emaciation, and of pregnancy at about the third month. She had incontinence of urine, accompanied by pain on its passage. Sweating and chills developed, with vomiting; the urine contained pus. Abortion took place at the fifth month. A few hours later she died of exhaustion. At the autopsy the lungs were found to be œdematous, with some adhesions at the posterior aspect of the apex of the right lung. The heart was normal. The liver weighed seven pounds, and contained fatty deposits. The kidneys weighed nine ounces each, and their surfaces were studded

with miliary abscesses. The bladder was normal. No tubercular deposits were to be found, nor were there metastatic abscesses elsewhere.

Dr. PEABODY doubted whether it could be said with certainty, with the symptoms given, that there had not been some septic influence, nor that the apparent abscesses were not tubercular.

Dr. ROBINSON also showed a specimen in which a communication existed between the pleura and the lungs, constituting a kind of valve, which would illustrate the possibility of the existence of such an opening without there being at the same time an interchange of fluids.

PYELONEPHRITIS AND ITS EFFECT UPON SURGICAL PROCEDURES.

Dr. JOHN A. WYETH presented specimens removed from a man who died in the hospital with cystitis and signs of hectic. He was 26 years of age, and had some time before been operated on for hemorrhoids, and cured. But three months later he returned, with frequent desire to pass urine, and later he developed high temperature. At the autopsy the kidneys were found the seat of pyelonephritis, constituting very fine examples of that condition. The ureters were distended. The bladder was greatly thickened from chronic cystitis. The latter condition had so overshadowed the kidney-symptoms that recently an operation had been attempted for drainage of the bladder. When operating for hemorrhoids, some time before, ether was administered, and the patient came near dying under its influence. On the occasion of doing cystotomy chloroform was administered, and scarcely had the external incision been made when the heart stopped, respiration ceased, and it was with some difficulty that the patient was made to rally. The operation was not completed. Dr. Wyeth prefers the lateral operation to the median. Sir Henry Thompson had spoken favorably of cystotomy in the treatment of chronic cystitis.

Dr. GERRISH said he had done the operation in one case with benefit.

Dr. PEABODY thought that an important question arose in these cases, important because difficult to answer,—viz., the possibility of excluding disease of the kidneys, or pyelonephritis.

The PRESIDENT thought that in such cases, in which there was pyelonephritis and consequent danger in administering an anæsthetic, cystotomy should not be performed.

Dr. WYETH thought the patients should have the benefit of cystotomy, notwithstanding the presence of pyelonephritis, and, if the operation were attended by some risk, that risk had better be assumed than allow the patient to suffer without any attempt at relief.

GLEANINGS FROM EXCHANGES.

THE ABUSE OF ALCOHOLIC LIQUORS.—Dr. James E. Reeves, Secretary of the West Virginia State Board of Health, makes the following well-timed protest against the constant use of alcoholic beverages, in an address before the Public Health Association, on the "Eminent Domain of Sanitary Science, etc.":

"The popularity of the milder alcoholic beverages—ale, beer, and wine—is directly due to the influence of our adopted fellow-citizens in all classes of society. I should be untrue to myself, to my position, to the medical profession, and to humanity, if I let this opportunity pass without sounding a note of warning against the intemperate use of alcoholic drinks, and to speak of their influence to debase the citizen and his progeny—physically, morally, and mentally—and deny him and them good health and longevity.

"The connection between drunkenness and crime, and between drunkenness and poverty, is close, and unvarying in its effect upon society. The remarkable increase of insanity in recent years may, in part, be traced to the prevalence of the intemperate use of intoxicating liquors. That wine, beer, and the stronger beverages, when taken in excess, all tend to derange the mental manifestations, is a fact too familiar to medical men to require of me argument to prove its truth. They act upon and disorder the brain more directly, perhaps, than any other organ, and, by habitual excess, may at last induce permanent impairment of the mental faculties.

"In times of epidemic visitation—when pestilence is sweeping the country—the intemperate and the drunkard are the first to fall by its arrows of death; and the chances of recovery from any disease or injury whatever are infinitely less for the drunkard than for the sober man. Were man to live as he should do,—*enjoying every good gift and abusing none*,—he would (saving accidents) live to extreme old age without disease. But, alas! how many such careful, prudent, temperate lives could there to-day be found in this great country of ours, where a kind Providence has made it possible for us to enjoy every blessing the whole world can afford? The denunciation by the prophet Isaiah—"Woe to the drunkards"—"*Woe to them that are mighty to drink wine*"—is not only in course of fulfilment every day with the drunkard, but the *curse* extends to his children yet unborn, even to the third and fourth generation, by inheritance of appetites which are far more constant and certain in their descent than patrimony.

"It has been asserted that at least seven-tenths of all the crimes and poverty and calamity to the people of the United States spring from the abuse of personal liberty in

the use of spirituous, vinous, and malt liquors; and if the charge be true—either in whole or in part—it is a subject which should concern sanitarians. Vice needs every possible exposure and discouragement to prevent its seeds from growth, and the lesson should everywhere be taught, that good health and long life cannot dwell in association with a poisoned mind or an upbraiding conscience."

CHLORATE-OF-POTASH POISONING.—Drs. Broesicke and Schadowald report a case (*Berliner Klinische Wochenschrift*, No. 42, 1883) of rapid poisoning by chlorate of potash in a healthy young man, aged 22. After excessive and incautious gargling with a strong solution for some trifling-throat affection, in the course of which he had swallowed a considerable quantity, the patient complained on the following day of sickness and of pain in the sides and loins. Signs of acute gastritis rapidly followed; nausea and severe pain in the splenic region were the chief symptoms. Some enlargement of the spleen could be detected. Heart and lungs were normal; but distinct cyanosis, especially of lips and extremities, was present. Two days after the poisoning severe vomiting set in, and lasted to the end. Icterus followed, but disappeared before death. On the fourth day, severe epistaxis occurred; extreme præcordial anxiety followed, but without any notable signs in heart or lungs; and some rigidity of the muscles of the extremities was observed. Death took place on the eighth day. Throughout the whole period of illness hardly any urine was passed; the temperature remained a little below the normal; the pulse, however, was of fair strength. The post-mortem examination, made four days after death, revealed a brown discoloration of the blood in the vessels. The blood, however, gave the normal appearance to the spectroscope. The spleen was very greatly enlarged, brownish in places, the capsule soft. The kidneys were also enlarged, the cortical portions expanded and of a dirty-green color. Microscopically, the straight and convoluted tubules were found filled with numerous brownish, irregular-shaped masses of hæmoglobin. The stomach showed acute and chronic catarrh, with a few ecchymoses. The large intestine and rectum contained a large quantity of brownish, watery fluid, and the mucous membrane appeared cedematous. Other organs normal.—*Medical Times and Gazette*.

DEATH FROM HEART-CLOT IN A FATTY HEART AFTER ETHERIZATION.—An interesting case is reported by Prof. Minot, of a single lady, 45 years of age, who had a right-sided pleural effusion, for which ether was successfully administered on October 15, and nearly two quarts of bloody serum were withdrawn. The chest having refilled, ether was again administered November 16, preparatory to a second paracentesis. The pa-

tient took the ether well, but when about a pint of the effusion had been withdrawn she became livid, and her breathing irregular and gasping. She was revived with difficulty, and two hours later she seemed quite recovered; subsequently the dyspnoea and lividity returned, and the patient died, asphyxiated, eight hours after the beginning of the etherization. An examination of the body showed a fatty heart, with a white clot extending from the right auricle into the pulmonary artery. She also had cancerous pleuritis and peritonitis.—*Boston Medical and Surgical Journal*, December 13.

MISCELLANY.

HYDROPHOBIA.—The Brown "Animal Sanitary Institution" (under the government of the University of London) has issued a notice, in which it is said that hydrophobia occurs in dogs of all ages, and may appear at any season of the year. It is recognized by a change of demeanor of the dog, which becomes dejected, morose, inclined to roam, and anxious to hide itself. The animal gnaws at wood, stones, and any refuse which it sees, snaps at imaginary objects, and becomes unusually excited by strange or sudden noises. It rubs its throat with its paws, as if striving to get rid of some object lodged there; at the same time there is a more or less abundant flow of saliva from the mouth. The dog will attack its master, or animals of any kind; but it is most easily roused to fury by the presence of other dogs. There is throughout the disease no dread of water. In one form of the disease, called "dumb madness," there is paralysis of the jaw, and therefore inability to bite. If a dog has shown any of the symptoms of madness, it should be at once loose-muzzled and securely chained up. Owners of dogs are warned of the danger they may incur by allowing their face and hands (especially if scratched) to be licked by the animals, even if these show no sign of madness. All dog-bites should be immediately cleansed by suction and washing, and the wounds should be cauterized as soon as possible.—*St. Louis Druggist*.

NOTES AND QUERIES.

MEMORIAL NOTICE OF DR. T. S. KIRKBRIDE.

The notice published in our last issue should be corrected in so far as it states that Dr. Kirkbride moved with his family into the new hospital building when it was opened. This, we are informed, was not the case; but he continued to occupy the mansion on the grounds for the Department for Females, in which he lived from 1841 up to his death. The Department for Males is in the new building; the old one is still devoted to the uses of the Department for Females. The following tribute to the memory of Dr. Kirkbride, which

appeared in the *Philadelphia Evening Bulletin*, is worthy of preservation:

IN MEMORIAM.

T. S. K.

Died December 16th, 1883.

O rare and radiant life, whose mission here,
Like some strong angel's winged with love divine,
Waited on human woe, to heal and cheer,
What high, unselfish, tireless zeal was thine;
To fan, with tender care, the flickering spark
Of waning reason and the shattered will.
To find the missing clue, where all is dark,
And guide to hope and light with patient skill;
True pity thine which clasped each clouded heart,
Nor on the lowliest ever looked askant.
Swaying distempered minds with sovereign art,
Gentle as woman, firm as adamant;
Nor less shall memory keep the tranquil grace
Of look and tone and bearing, staid and calm,
The sweet serenity of form and face,
Home's dearest solace, friendship's kindest balm.
By this new grave no broken shaft we rear:
Thy finished work has followed thee above,
One step from duty, midst the shadows here,
To the full sunshine of eternal love!

W. A. B.

CHRISTMAS, 1883.

RESOLUTIONS ON THE DEATH OF DR. WILLIAM H. HOOPER.

At a meeting of the Executive Committee of the Wood Medical Journal Club, held December 21, 1883, it was

"Resolved, That in the death of Dr. William H. Hooper this Club, in common with the medical profession of the city of Philadelphia, has lost a member conspicuous alike for the breadth of his culture, the soundness of his judgment, and the urbanity of his manner.

"Resolved, That we recognize in his acknowledged success as a practitioner the merited reward of long years of patient study, preliminary to, as well as during, his special preparation for professional life.

"Resolved, That a copy of these resolutions be sent to the family of the deceased, and to the *Philadelphia Medical Times*, *Medical Bulletin*, and *Medical and Surgical Reporter*."

(Signed) W. R. D. BLACKWOOD,
Secretary,
BENJAMIN LEE,
Chairman.

For the Committee.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 22, 1883, TO JANUARY 5, 1884.

APPEL, DANIEL M., CAPTAIN AND ASSISTANT-SURGEON.—

Having relinquished the unexpired term of leave of absence granted by S. O. 68, Headquarters Division of the Atlantic, November 16, 1883, and reported for assignment, assigned to duty at Fort Porter, New York. Paragraph 2, S. O. 247, Department of the East, December 29, 1883.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—

Assigned to duty in charge of office of Medical Director Department of Texas, during the temporary absence of that officer. Paragraph 2, S. O. 164, Department of Texas, December 31, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM DECEMBER 29, 1883, TO JANUARY 5, 1884.

Medical Director A. L. GIBON to the Naval Hospital, Washington, D.C.

P. A. Surgeon CHARLES W. RUSH, U.S. steam-ship "Colorado," granted sick leave for three months.

Medical Inspector A. HUDSON from duty as Assistant to the Bureau of Medicine and Surgery, on the 18th inst., to the U.S. steam-ship "Lancaster," as the relief of Medical Inspector F. L. Bates, who is to be detached and ordered home.

P. A. Surgeon A. C. H. RUSSELL from the Navy-Yard, Washington, to hold himself in readiness for sea-service.

PHILADELPHIA, JANUARY 26, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON REMITTENT FEVER COMPLICATED WITH HÆMATURIA AND TYPHOID SYMPTOMS—THE TREATMENT OF RHEUMATISM.

Delivered at the Philadelphia Hospital

BY JAMES TYSON, M.D.,

One of the Physicians to the Hospital, and Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—In the case that I shall bring before you to-day there are some rather unusual features, which require study. The history is as follows. The patient, a laborer, 28 years of age, and a native of Ireland, was admitted to the hospital October 11, 1883. He says that he has been temperate, and denies all venereal history. He was well up to the summer of last year, at which time he was working in New Jersey, and had malarial fever. This continued for two months. In September last he again had chills and fever. On the 1st of October he was exposed to rain, and this exposure was followed by diarrhoea and a feeling of exhaustion. When admitted into the wards, the diarrhoea was slight, but he passed large quantities of dark-colored urine.

It is evident from this history that the man has had malarial fever; but the symptoms which he presented on admission were also of a kind to suggest typhoid fever. But, after watching the temperature and other features of the case for a few days, it became evident that this diagnosis could not hold. I wish to-day to call attention to the points in this case and discuss them with you, and draw such conclusions as may appear justified.

In the early part of the attack the patient had diarrhoea. When I first saw him, he had a dry, coated, leathery tongue. These, with a more or less constant feverish condition, are the suggestive symptoms alluded to; but careful examination of the abdomen failed to reveal the presence of the characteristic spots of typhoid fever. Even if this eruption, which usually appears about the eighth day, be not

present, the temperature-record will in ordinary cases enable the diagnosis to be made. The course of the temperature in typhoid fever is as follows: there is always an evening rise and a morning fall; but, as the temperature is recorded day after day, it is observed that the evening temperature is always a little higher than that of the previous evening, and each morning temperature a little higher than that of the previous morning: so that we have a tidal rise in the temperature, which in the course of the second week reaches its maximum. As the diagnosis in this case was not positive, the temperature was carefully taken twice a day. October 12th, A.M., it was 100.4°; P.M., 103.2°; 13th, A.M., 98.6°. This was altogether unexpected. Instead of being higher than the previous morning, it was two degrees lower. On the evening of the 13th the temperature was 100.6°, higher than the morning temperature, but still considerably less than the previous evening; 14th, A.M., 100°; P.M., 100.4°; 15th, A.M., 99°; P.M., 100.6°; 16th, A.M., 98.4°; P.M., 98.2°; 17th, A.M., 98.4°; P.M., 100.4°. It is not necessary to go further with the reading of the temperature. It is at least evident that there is nothing of the nature of a tidal rise. On the other hand, there is quite a constant morning temperature, which by evening has gone up to about 100°. It is clear that this is not a case of typhoid fever. There is another symptom in this case which does not belong to typhoid fever: there is more or less constant bloody urine. I can account for this condition on no other ground than that it is malarial in its origin. There is no undue frequency of micturition, and no evidence of disease of the bladder or of the kidneys.

The only conclusion to which I could come, in view of these facts, was that our patient's disease was essentially malarial fever of the remittent type, with typhoid symptoms, and might be called typho-malarial fever.

Now, there are two ways in which this term may be applied. In the first place, that disease may be called typho-malarial fever in which there is malarial fever complicated with typhoid symptoms, or the term may be applied to cases in which the two diseases exist together,—that is, typhoid fever running *pari passu* with ma-

larial fever. A third application of the term typho-malarial fever has been made; that is, to indicate a special form of fever with its own morbid anatomy, distinct from that of typhoid fever and of malarial fever. But this idea, which originated with Dr. Woodward, of the army, has been given up. Can we in this particular instance settle this question? Can we say whether it is a case of malarial fever with a typhoid complication, or whether it is a case in which typhoid and malarial fevers are concurrent? In the first place, there can be no doubt that two general diseases may coexist in the same individual. You have probably all heard of measles and scarlet fever running their course together. Some diseases are nearly always associated, as, for instance, pneumonia and pleurisy, and pneumonia and bronchitis; but I am now referring more particularly to general diseases.

There is, therefore, no reason why we should not have malarial fever and typhoid fever concurrent. But let us discuss somewhat further the grounds on which we conclude that such is not the case in the present instance. This patient has been under observation for twenty-one days. As a rule, a case of typhoid fever either becomes decidedly convalescent or else ends fatally by the end of the third week. In the course of the third week the temperature begins to fall, and there is a tidal decline. The morning temperature is a little lower than that of the previous morning; the evening temperature a little higher than the temperature of the morning of the same day, but a little lower than that of the previous evening. If this were a case of typhoid fever, we should expect it to show some disposition to terminate. In point of fact, during the past week the symptoms have become aggravated. His dry tongue had, under the use of turpentine, become moist, and all the symptoms, excepting the hæmaturia, had improved; but last week they became aggravated, and the temperature rose decidedly. On October 24th and 25th the temperature was normal. On the 26th it began to rise, and reached 103° . The next day it was in the morning 103° , and in the evening 104° . Since then the temperature has not been below 100° until the evening of October 31st, when it was 98.4° .

These symptoms, however, suggest a re-

lapse in typhoid fever. You are aware that relapses in this disease are not infrequent; but when typhoid fever relapses it repeats its previous history. The spots, diarrhœa, and peculiar temperature recur. But there has been no diarrhœa; there are no spots on the abdomen; there is no tympanitis; neither is there marked abdominal tenderness. This case does not give us a repetition of the symptoms of typhoid fever, and we cannot consider it a relapse. I feel constrained to class this as malarial fever of the remittent type; for, as you see, there is more or less continuous fever. There are also typhoid symptoms, so that in one sense of the term it is a case of typho-malarial fever; but it is not a case of concurrent typhoid and malarial fever.

As we were under the impression, when he was first admitted, that we had a case of typhoid fever to deal with, he was placed upon a treatment which would really answer for both diseases. In the first place, I always begin the treatment with quinine for a few days, for it is often impossible to tell at first whether a fever is malarial or typhoid. Sixteen grains of quinine per day, continued for four or five days, will have the effect, in the first place, of keeping up the powers of resistance of the patient, and, in the second place, will remove any malarial element. We used quinine in the present case, and the symptoms were much improved. On account of the condition of the tongue, I also ordered ten drops of turpentine four times in the twenty-four hours. We made no local application, as is our custom in typhoid fever, in the form of poultices and turpentine stupes. Under this treatment he improved decidedly. Last week we suspended the treatment, and in the result of this suspension of treatment we have another evidence of the malarial nature of the disease. As soon as the treatment was stopped, all the old symptoms returned. We again returned to quinine and turpentine; but during the past twenty-four hours the administration of these remedies has been interfered with by "hic-cough."

The treatment of this symptom has therefore claimed our attention exclusively during this period. Sometimes it is a mere nervous symptom, which a more powerful nervous impression will cause to disappear. At other times it becomes a severe and

obstinate complication. You all perhaps recall the treatment for the hiccough of our childhood,—that is, the taking of three swallows of water without interruption, which is the substitution of one nervous impression for another. Hiccough is a spasmodic contraction of the diaphragm, with sudden closure of the larynx. A variety of remedies have been recommended: one of the best is counter-irritation in the region of the diaphragm. A large mustard-plaster will often answer the purpose. If counter-irritation fails, morphia, in doses of one-quarter of a grain three or four times a day, may be employed. Failing in this, chloroform, in the form of the spirit or tincture, may be employed in doses of half a teaspoonful every three or four hours. Hoffman's anodyne is sometimes employed with advantage. Nitrite of amyl is also given with satisfactory results. In administering this remedy, the little glass pearls should always be used, one of them being crushed in a handkerchief and the drug inhaled. Another remedy which has considerable reputation in hiccough is musk. As it is doubtful whether we can now procure pure musk, it is not administered as often as it formerly was. Chloral in combination with bromide of potassium is an excellent remedy. The order in which, under ordinary circumstances, I would use these remedies is the following: counter-irritation with mustard, chloral, opium, chloroform, Hoffman's anodyne, musk, and finally a blister, as we have done in this case. The hiccough has been somewhat improved since the application of the blister. It is intermittent, lasting for a few hours, and then disappearing for several hours.

During the last few days there has been gradual improvement. The fever has diminished, and the amount of blood in the urine has lessened. This is a specimen of the urine last passed. From its appearance, only, it would be impossible to say whether or not it contains blood. A small quantity of blood in an acid urine gives the liquid a smoky hue, of which this is a fair representation. Sometimes the urine is perfectly clear. This is characteristic of malarial hæmaturia.

We have come to the conclusion that this is a case of remittent malarial fever with typhoid symptoms. As to the cause of these symptoms, it is difficult to say. He may be the subject of septic conditions

resulting from his residence, habits, or other causes. Typhoid fever is a form of septic fever, resulting from the absorption into the blood of putrid poisons; but there may be other forms of manifestation of septic fever than the symptoms of typhoid fever. This man may have had introduced into his system septic matters giving rise to the symptoms which he has presented.

THE TREATMENT OF RHEUMATISM.

I shall devote the few remaining minutes of the hour to the consideration of a case of rheumatism. He gives the following history. He is 37 years of age. Seven years ago he had typhoid fever, and five years ago he had rheumatism in the left shoulder, hand, and foot. The present sickness began in December, 1882. While cutting ice, he became wet, and remained in his wet clothing for half an hour. The next day he was taken sick with fever. The right wrist soon became swollen. The swelling next affected the right ankle, and then the left ankle. Looking at his wrists, you observe a peculiar deformity, which is due to accumulation of fluid. In other words, these joints are the seat of rheumatic synovitis. The joints of the feet are also affected. The early history of this case is typical of acute articular rheumatism. The form of exposure which preceded the development of the acute symptoms is that which is peculiarly prone to develop acute articular rheumatism. I refer to exposure to cold and wet combined. The swelling and pain left one joint to appear in another. This is characteristic of rheumatism. He has never been well since this attack developed, but the acute symptoms have subsided, and there is now a condition of subacute rheumatism.

When taken sick, he sought no advice but that which he could gain at a drug-store. He was given something to take internally, and a liniment to rub the affected joints. This is just the sort of treatment we should expect to be followed by the chronic form. It used to be said that the best cure for rheumatism was "six weeks," by which was meant that there was no remedy which was of especial service in this affection, and that under ordinary circumstances it would get well of itself in six weeks. Although this may have been true then, it is not true at the present time. There is no doubt that we

have in salicylic acid and the salicylate of sodium remedies which greatly increase our power over rheumatism. We now take hold of a case of acute rheumatism with the greatest confidence. In my own experience I do not recall a single case of acute articular rheumatism coming under observation at an early period in which salicylate of sodium failed to bring about a cure. If this man had been properly treated, he probably would not have been here to-day.

My method of giving salicylate of sodium is to administer ten grains every two hours, and continue this until the pain has disappeared and the swelling diminished. After the disease has yielded, it does not do to stop the treatment, but the remedy must be continued for ten days or more, ten grains being given every four hours.

Salicylate of sodium is not the only remedy of service in acute rheumatism, and there are certain conditions which call for a modification of the treatment. When the patient has not been in a condition of previous good health, but has been depressed by unfavorable hygienic surroundings, it is often necessary to combine iron with the salicylic acid. At times iron alone is sufficient.

After a case has passed into the sub-acute form, as in the present instance, how is it to be treated? Is salicylic acid of any service in this condition? It may be, although less certainly than in acute rheumatism. At the same time, I am apt to begin the treatment with salicylic acid; but the method in which I have most confidence is that by counter-irritation with fly-blisters. A blister one or two inches square should be applied over the various joints in succession, and the counter-irritation kept up for weeks. In a case like this it is not always necessary to resort to so formidable a remedy as blisters. Painting the parts with iodine will sometimes cause absorption of the fluid and the disappearance of the symptoms. The internal use of iodine and iodide of potassium is also resorted to in these cases. Iodide of potassium may be given in doses of ten grains three times a day, or Lugol's solution may be substituted and continued for a considerable length of time.

The question has probably arisen in your minds, Is salicylate of sodium of service in what is called muscular rheumatism? It is not nearly so useful in this

affection as in acute articular rheumatism. Although I have known it to be occasionally of service in such cases, the best treatment in my experience for muscular rheumatism is dry and moist heat, and moist heat in the majority of cases. This form of heat is obtained by the use of hot baths. I have recently used, with much satisfaction, hot soda-baths, in which from half a pound to a pound of washing-soda is added to an ordinary bath of hot water. This should be taken on going to bed. The use of dry heat is also of service. One of the most annoying forms of muscular rheumatism is the ordinary stiff neck. The best remedy for this condition is a gum bag filled with hot water, on which the neck should be laid on going to bed. In the majority of cases the pain will have disappeared before morning.

ORIGINAL COMMUNICATIONS.

A NEW METHOD FOR DETERMINING THE AMOUNT OF BLOOD THROWN INTO THE ARTERIAL SYSTEM BY EACH VENTRICULAR SYSTOLE, AND FOR ESTIMATING THE TIME REQUIRED FOR THE CIRCULATION OF THE BLOOD.

BY ROBERT MEADE SMITH, M.D.,
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FROM the time of Santorini (1724) various attempts have been made to determine the quantity of blood thrown out from the heart at each contraction of the ventricles.

Santorini, followed by Legallois (1824) and Colin, estimated the cubic contents of the chambers of the heart by filling them after death, before the onset of rigor mortis, with a fluid of known density, and assumed that the amount so determined coincided with the quantity of blood propelled by the heart at each contraction during life. But this method, as well as that employed by Brücke (1850), Hiffelsheim, and Robin (1864), of making wax casts of the chambers of the heart after death, is open to the objections that nothing is positively known as to whether the ventricles completely empty themselves in their systole or not, or under what pressure they are filled: the importance

of a consideration of the latter point will be referred to later.

Nor can the observations of Abegg (1848) be regarded as throwing any additional light on this subject. He opened the thorax of a living animal and ligated all the vessels at their origin and termination in the heart, the arteries being first closed: the heart was then excised and weighed, and, after allowing the contained blood to escape, was weighed again, the loss of weight giving the weight of the blood. It is, however, manifestly unwarrantable to assume that this amount was evenly distributed among the four chambers of the heart; while, even if we waive this objection, and further assume that each cavity was filled under its normal tension, the experiment does not assist in determining the amount of blood thrown out at each contraction, especially since Sandborg and Worm-Müller have shown that it is by no means certain that the ventricles completely empty themselves during systole.

Volkman in 1850 reckoned the capacity of the ventricles in the following manner. He first estimated the velocity of the circulation in the carotid by means of his hæmodromometer (a thoroughly unreliable method), and then the cross-section of the aorta: from these data he calculated how much blood passes through the *aorta* in a unit of time. If, then, the amount of blood in the body be known, the time necessary for its complete circuit can be calculated; and, if the number of pulsations of the heart in this time are known, the amount thrown out at each pulsation is readily reached.

It is seen, however, that the cornerstone of this argument rests upon an accurate determination of the velocity of the circulation in the aorta, a quantity of such great variability, as shown by Ludwig and Dogiel, as to render the statement of any estimate of its average velocity entirely unjustifiable; and when it is remembered that Volkmann's estimate of even this quantity was reached from measurements made on the *carotid*, the unreliability of his conclusions is still further emphasized.

Vierordt's method is based upon the same principle as that of Volkmann, and is therefore open to the same objections.

More recently, Fick (1869) has attempted to estimate in man the rapidity

of the circulation, and the amount of blood thrown out at each contraction of the heart, by measuring by means of the plethysmograph the increase in the volume of the arm at each cardiac systole. By this means, however, he was able simply to determine how much more blood was forced into the axillary artery than escaped within the given time-unit through the axillary vein, and not the absolute amount of blood forced into the arm. In order to supply this deficiency, he assumed that the variations in rapidity of circulation in man coincided with the measurements made by Chauveau, Berthollus, and Lavayenne on the horse, and constructed the point of equilibrium in the vessels of the arm from an observation of Marey on the alterations of the rapidity of the circulation in the carotid of the horse. By this plan, knowing the ratio between the lumen of the axillary artery and that of the aorta, he was able to calculate the amount thrown out during systole of the left ventricle. His estimate, however, falls far below that of the majority of observers: thus, Fick's estimate was about 76 c.c.; Krause's, 160 grms. (obtained by measurement after death); Volkmann's, 187.5 grms.; Vierordt's, 180 grms.

It is worthy of notice that as yet no attempt has been made to measure directly during life the quantity of blood thrown out by the heart, and it is evident that any method by which this amount can be so determined must give far more accurate results than one depending on such uncertain data as those heretofore employed. The method which I employed last summer in the Leipsic Physiological Institute, under the direction of Prof. Ludwig, renders this possible and promises to yield valuable results. The present communication, however, is only to be regarded as a preliminary note.

The plan of the research rests upon the diversion during life of the entire arterial blood-current, directly after leaving the left ventricle, into a reservoir of known capacity, then into the right heart, then to the lungs, and finally again to the left ventricle: so that, while the pulmonary circuit remains undisturbed, a vessel in which the rapidity and volume of the arterial stream can be measured is substituted for the systemic circulation.

The great bulk of the arterial system

was obliterated by passing a flexible rubber catheter, terminating in a small rubber bulb, through the left axillary artery into the descending aorta, so that the bulb occupied a position directly below the arch of the aorta. In the undistended condition, the catheter and bulb, being so much smaller than the calibre of the aorta, did not materially interfere with the normal blood-supply of the trunk and lower extremities: this was always tested by measuring the blood-pressure in the vessels of these parts by means of a manometer connected with the femoral artery. As soon, however, as the bulb was distended by injecting water through the catheter, the blood-pressure, as measured in the femoral artery, instantly fell to zero, showing a complete occlusion of the dorsal aorta; while, from the position of the bulb, which was always verified by post-mortem examination, the only arteries still remaining patulous were the coronaries and the two subclavian and carotid trunks, with their branches. This can be made evident by reference to the diagram of the great vessels in the dog, the animal always employed in these experiments. It is there seen that immediately after leaving the arch of the aorta, the subclavians (or, more strictly, the axillaries, as the dog has no clavicle) give off four large arteries, the vertebral, the profunda, the mammary, and a muscular branch. These vessels are ligated on both sides of the neck, so leaving only the carotids to carry blood to the brain during the intervals of the experiment.

If now a canula be inserted in the right axillary artery on the proximal side of the ligature, and connected by tubing with a canula in the right external jugular vein, the carotids being occluded by loops and the bulb in the aorta distended, all the blood driven out by the left heart at each pulsation will be forced into the jugular vein, and so into the right heart. It then only remains to determine the amount of blood passing through the connecting tubing in any given unit of time, which quantity, divided by the number of pulsations in the same time, will give the amount of blood forced out from the heart at each pulsation.

The instrument which I used to measure the flow of blood through the right axillary artery was a modification of Ludwig's rheometer (stromuhr). The essential parts of this instrument (see fig.) are two

communicating glass vessels (*a* and *b*), whose cubic contents from the constriction at *c* to the constriction at *d* are accurately known, inserted in the metal disk *f*, which is capable of being rotated through half a circle on *g*. The tubes *h* and *h'* communicate at one end with the bulbs *a* and *b*, and at the other with canulæ inserted in the blood-vessels, the apparatus being so arranged that the blood-current enters at *h*; the bulb *a* with its tube, and the tube *h* up to *c'*, are filled with defibrinated blood, while the bulbs *h*, *h'*, and *b*, and the connecting tube *l*, are filled with oil. When the blood from the artery is allowed to enter *h*, it forces the oil in *b* before it over into *a*, while the blood contained in the latter enters the blood-vessel through *h'*: when the bulb *b* is entirely filled with blood, the bulbs *a* and *b* are turned through a half-circle and the process repeated. It is then only necessary to know the time required to fill either bulb to know the quantity of blood flowing in that time through the artery.

It was found in my earlier experiments with the ordinary form of stromuhr that the force of the blood-current was so great as to drive the blood in jets through the oil contained in the bulbs, instead of gradually displacing it and thus rendering it impossible to determine the exact time when the bulbs are filled. After testing various modifications in the form of the stromuhr, the following seemed to overcome this difficulty: a T-tube was inserted into *h*, the cross-arm of which communicated with a metal capsule whose top was formed by a rubber membrane; the elasticity of this membrane served to overcome the intermittent force of the pulse and to render the stream continuous, besides greatly reducing the resistance of the stromuhr.

The shape of the stromuhr was further modified, as shown in the diagram, so as not only to break up the force of the entering blood-stream, but also to permit a more accurate estimation of the time at which the bulbs were filled. The bulbs were also made much larger than in the earlier form. The stromuhr was further so arranged that each time the disk was turned through a half-circle it alternately opened and closed an electric circuit passing through an electro-magnetic lever writing on the revolving drum of the kymographion.

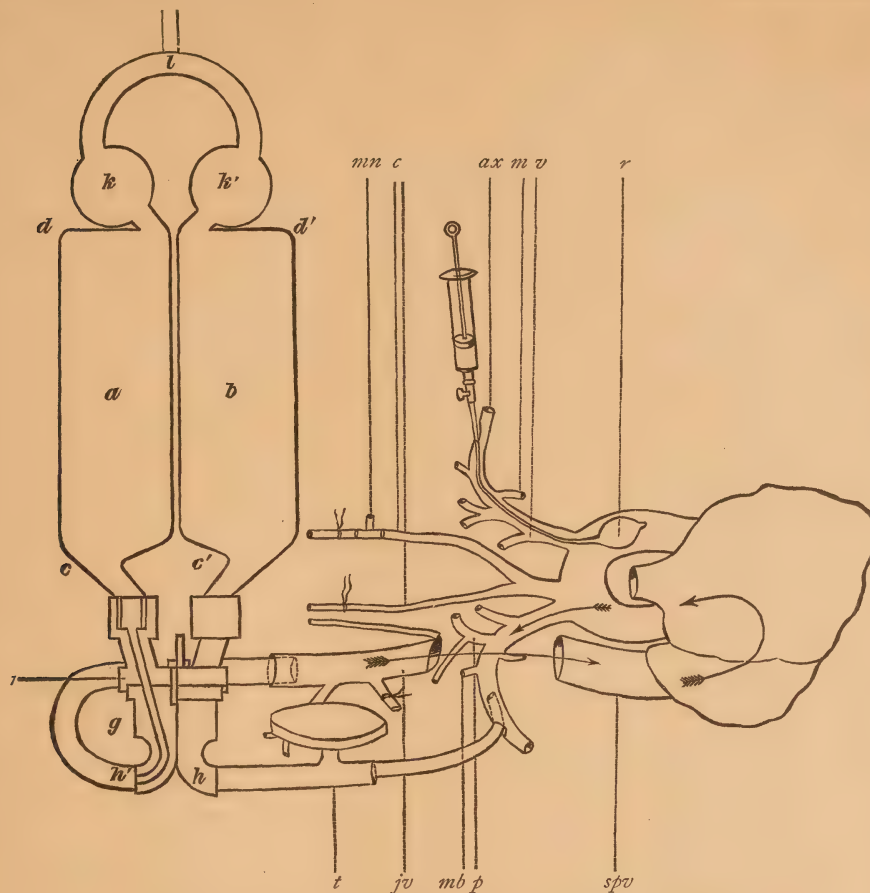


DIAGRAM OF GREAT VESSELS OF THE DOG, AND ARRANGEMENT OF APPARATUS.

ax, axillary artery; *m*, mammary artery; *v*, vertebral artery; *p*, profunda colli; *mb*, muscular branch; *spv*, superior vena cava; *jv*, right external jugular vein; *c*, carotid arteries; *mn*, manometer; *t*, metal capsule with rubber membrane; *r*, rubber bulb of catheter. In order to avoid complication, the arrangements for turning the stromuhr and for opening and closing the recording electric circuit are not represented.

Method of Experimentation.—In some cases the dogs were first narcotized with chloral; but this, combined with the peptone that was subsequently injected to prevent coagulation, seemed to increase the fatal tendencies of the latter, and several experiments failed on this account. In other and more satisfactory cases the animals were chloroformed during the operation, and then allowed to regain consciousness before the peptone was given, the latter being sufficiently narcotic to prevent pain and to keep the animal motionless.

The first step in the operation, after performing tracheotomy, was to insert a canula into the crural vein, for the injection of the peptone solution, and then to connect the crural artery with a mercurial

manometer to determine the time at which the aorta was occluded.

An incision was then made on the right side of the neck, a little above and parallel to the first rib, all vessels lying in the course of the incision being divided between two ligatures, and the axillary artery exposed where it crosses the first rib, carefully raised with a blunt hook, and all its branches tied. The success of the experiment depends upon the occlusion of every branch given off by the axillary artery: as already stated, these are usually four in number. The right external jugular vein is then isolated well down in the neck, its branches tied, and a loop placed around it. This loop, as well as the one around the axillary artery, is not tied until the last moment, so as to pre-

serve the circulation unaltered as long as possible, and to prevent the formation of clots.

The right and left carotid arteries are then isolated and surrounded by loops.

The left axillary artery is then exposed and its branches tied as in the case of the right. On this side the operation is more difficult, from the deeper seat of the vessels, and there is more danger of wounding the pleura.

For every kilo of body-weight of the animal three cubic centimetres of a ten-per-cent. solution of pure peptone in half-per-cent. salt solution are then injected into the femoral vein, to prevent coagulation of the blood. The first effect of this injection is to cause a marked temporary reduction in blood-pressure from vasomotor paralysis; the measurement of the flow through the aorta is not attempted until the vessels have nearly regained their normal tone; the blood remains incoagulable for several hours.

Glass canulæ of the same diameter as the blood-vessels are then inserted into the right axillary artery and jugular vein, filled with defibrinated blood, and connected with the tubes of the stromuhr, which had been previously filled, as described, with defibrinated blood and oil.

A small T-tube is then inserted in the left carotid artery, on the proximal side of the loop, and connected with a Fick's spring manometer to measure the pressure in the stromuhr and to count the pulsations of the heart. The object of the T-tube is to permit the free supply of blood to the brain in the intervals of the experiment. The catheter and bulb are then inserted through the left axillary artery and pushed to their proper position, determined by measurement, in the aorta.

The manometer in the carotid and the electric marker of the stromuhr write in a vertical line over a seconds time-marker on the revolving drum of a kymographion.

The bulb in the aorta is then distended, and as soon as it is certain that the aorta is occluded, the loops on the carotid are elevated and the stromuhr turned so that the blood enters it from the aorta. As soon as the bulb is filled, the stromuhr is turned and the operation repeated until the oil and blood become so mixed that the time required to fill each bulb can no longer be accurately determined. The animal is then killed by injection of cu-

rare, and the heart immediately excised and placed in a ten-per-cent. solution of sodium chloride to prevent coagulation of the myosin of the heart-muscle; rigor mortis is thus prevented.

The two coronary arteries are then ligated, the greater part of the left auricle cut away, and a wire ring stitched to the free edge of the remaining portion, and, after destroying the semilunar valves, a graduated glass tube bound into the aorta. The heart is then re-immersed in a ten-per-cent. salt solution until all the cavities are filled with the liquid, when the heart is suddenly elevated so as to close the mitral valve. The fluid on the outer surface of this valve is then removed with a pipette, and that in the aortic tube withdrawn with a siphon until the level of the aortic orifice is reached. The siphon is then pushed down to the apex of the ventricle and its contents drawn off and measured; by this means every drop of fluid in the ventricle can be drawn off and the cubic contents of the cavity so determined compared with the quantity thrown out at each pulsation during life.

The pressure, therefore, to which the ventricle is subjected when its capacity is measured after death is zero, because, as shown in Goltz and Gaule's experiment, there is a negative pressure in the left ventricle during its diastole, and because, as shown in Experiment I., the slight increase of pressure on the walls of the ventricle caused by a column of salt solution of 39 mm. in height is capable of increasing the capacity of the ventricle by one-third.

The following are the details of some of the experiments made after this method:

Experiment I.—The stromuhr without rubber capsule was employed; its resistance was estimated at 130 mm. mercury. The blood-pressure in the carotid, after closure of the aorta and all blood-vessels with the exception of the two vertebrals, which by mistake were left open, was 135 mm. mercury. Respiration was natural throughout the entire experiment.

The average number of heart-beats required to fill each bulb was 12, and, as the bulbs contained 123 c.c., the quantity thrown out at each pulsation was about 10 c.c. This coincided with the cubic capacity of the left ventricle as measured after death, viz.:

Capacity of the heart under 0 mm. ten-per-cent. salt solution pressure = 10 c.c.; under 28 mm. salt solution pressure = 11.5 c.c.; under 35 mm. salt solution pressure = 13.5

c.c.; under 39 mm. salt solution pressure = 15 c.c.

Experiment II.—Dog: chloralized and peptonized; artificial respiration. All the vessels were correctly ligated, and the rubber bulb of the catheter occupied its proper position in the aorta. The stromuhr with rubber capsule was employed; its resistance estimated at 10 mm. mercury. Pulse recorded with Fick's manometer in connection with the carotid.

First Series.

Observation.	Pulsations.	Time.	Amount expelled at each beat.	Heart-rate per min.
1	53	24 sec.	$2\frac{17}{53}$ c.c.	132
2	43	18 sec.	$2\frac{37}{43}$ c.c.	140

Second Series.

1	55	27 sec.	$2\frac{13}{55}$ c.c.	120
2	44	20 sec.	$2\frac{25}{44}$ c.c.	132
3	53	24 sec.	$2\frac{17}{53}$ c.c.	132
4	51	24 sec.	$2\frac{21}{51}$ c.c.	130
5	50	23 sec.	$2\frac{23}{50}$ c.c.	130

Average amount thrown out at each pulsation = 2.4 c.c.

Cubic capacity of left ventricle measured after death under zero pressure = 6.0 c.c.

Experiment III.—Dog narcotized with chloral: coagulation prevented with peptone. Stromuhr and capsule employed.

First Series.

Observation.	Pulsations.	Time.	Amt. expelled at each beat.	Heart-rate.	Respiration.
1	40	—	$3\frac{3}{40}$ c.c.	—	Artificial.
2	36	—	$3\frac{15}{36}$ c.c.	—	"
3	37	15 sec.	$3\frac{37}{37}$ c.c.	148	Natural.
4	36	15 sec.	$3\frac{15}{36}$ c.c.	144	"
5	32	15 sec.	$3\frac{27}{32}$ c.c.	128	Artificial.
6	30	15 sec.	$4\frac{1}{30}$ c.c.	120	"
7	30	16 sec.	$4\frac{1}{30}$ c.c.	120	"
8	30	15 sec.	$4\frac{1}{30}$ c.c.	120	"
9	134	72 sec.	—	—	Without respiration and without closure of the aorta.

Second Series.

1	54	17 sec.	$2\frac{15}{54}$ c.c.	190	Artificial.
2	53	17 sec.	$2\frac{17}{53}$ c.c.	—	"
3	50	16 sec.	$2\frac{50}{50}$ c.c.	—	"
4	46	14 sec.	$2\frac{31}{46}$ c.c.	—	Natural.
5	43	14 sec.	$2\frac{37}{43}$ c.c.	140	"
6	43	14 sec.	$2\frac{37}{43}$ c.c.	"	"
7	54	17 sec.	$2\frac{15}{54}$ c.c.	190	Artificial.
8	55	17 sec.	$2\frac{13}{55}$ c.c.	—	"
9	52	16 sec.	$2\frac{52}{52}$ c.c.	—	"
10	53	17 sec.	$2\frac{17}{53}$ c.c.	—	"

Cubic capacity of left ventricle estimated after death = 10 c.c. under zero pressure.

Weight of dog = 10 kilo.

Experiment IV.—July 21. Dog narcotized with chloroform, and then with chloral. Stromuhr with capsule employed.

Observation.	Pulsations.	Time.	Amt. expelled at each beat.	Heart-rate.	Respiration.
1	10	$5\frac{1}{2}$ sec.	12 c.c.	110	Normal.
2	13	$6\frac{1}{2}$ sec.	$9\frac{6}{13}$ c.c.	—	—
3	17	$7\frac{1}{2}$ sec.	$7\frac{4}{17}$ c.c.	—	Irreg'lar.
4	23	$7\frac{1}{2}$ sec.	$5\frac{8}{23}$ c.c.	—	—
5	30	12 sec.	$4\frac{1}{10}$ c.c.	150	—

Cubic contents of left ventricle = 16 c.c., zero pressure. Weight of dog = 12½ kilo.

Several conclusions may be drawn from these experiments.

In the first place, it is seen that the amount of blood thrown out by the heart is by no means a fixed quantity, and that measurements made of the capacity of the ventricles after death have no value in this connection: the only instance in which these quantities were at all approximate is seen in the first experiment; but in this case, from an accidental disarrangement of the apparatus, the pulse had to be counted in the jets of blood in the stromuhr. An error could thus easily have been made.

As a rule, more blood is expelled from the left ventricle when the rate of pulsation of the heart is slow than when rapid. This is well shown in Experiment IV., where, in the first observation, 12 c.c. were thrown out at each beat, the rate of pulsation of the heart being about 110 per minute; while, when the heart-rate was increased to 150 per minute, only $4\frac{1}{10}$ c.c. were expelled. These are two extreme cases. The other observations serve to confirm this statement. It is also to be expected that the character of the respiration would influence the quantity of blood leaving the ventricles, or, more properly, entering them.

When artificial respiration is employed, the aspirating effect of the lungs is not only lost, but the dilatation of the heart is hindered by the positive pressure exerted on its walls by the lungs; the heart will, therefore, fill itself incompletely, and therefore discharge less blood, while the rate of pulsation will ordinarily be increased. This state of affairs is seen in the latter part of Experiment III.

In these experiments the amount of blood leaving the left side of the heart has been alone measured; but, of course, all that has been said of the left ventricle applies equally to the right, since they must propel equal amounts of blood simultaneously. For, were the right ventricle to discharge the most, as has been claimed by Colin, the blood must eventu-

ally collect in the lungs; while, if it discharged less than the left ventricle, the blood would stagnate in the systemic capillaries.

These experiments will also serve to throw some light on the time required by the blood for making one complete revolution of the body.

The method most generally accepted as giving a correct solution of this problem is that first employed by Hering, and afterwards by Pousseuille, Vierordt, and Blake: it consists in injecting a solution of ferrocyanide of potassium into one jugular vein, and then determining the time elapsing before the salt can be detected in blood taken from the jugular vein of the other side.

As determined by this method, the time required for making the complete circuit of the body in the dog was 15.22 seconds (Vierordt); or, as expressed as a general law, the circulation requires for its completion, in all groups of mammals, twenty-seven pulsations of the heart (Vierordt).

Now, taking the most favorable circumstances for the testing of the truth of this statement, it is seen in Experiment IV. that the greatest amount thrown out at any one contraction was 12 c.c., and the weight of the dog was 15.5 kilo. If we accept the statement of Heidenhain, that the amount of blood in the body of an average dog is one-thirteenth of its body-weight, the animal experimented on in the above instance must have contained about one kilo of blood, or, the specific gravity of blood being 1050-1060, from 950 to 940 cubic centimetres of blood. It would therefore require seventy-nine or seventy-eight pulsations of the heart to propel the entire amount of blood once around the circuit of the body; the pulse being 110 in a minute, it would require, therefore, forty-three seconds to complete the circulation in the dog.

It should, moreover, be noticed that the example taken is the one in which the largest quantity of blood was propelled at any one time, and is therefore most favorable to the statement of Hering.

It is evident, therefore, that in the method employed by Hering, although it has given tolerably constant results in the hands of different observers, there must be some factor concerned other than the mere mechanical propulsion of the blood. Some experiments of Pousseuille

seem to throw some light upon this point. He found, as quoted by Matteucci, that there was a marked difference in the time required by different substances to complete the circuit, even though they were given in quantities small enough to be without effect on the force or number of the heart's pulsations. Thus, while the ferrocyanide of potassium was detected in eighteen seconds in the horse, when a little alcohol was added to the ferrocyanide the latter did not escape from the opposite jugular vein until after forty to forty-five seconds. It seems probable, therefore, since we know that different liquids brought into contact will diffuse into one another with different degrees of rapidity even when the masses of the liquids are at rest, that Hering's results are partly to be attributed to the physical laws of diffusion, and not solely to a mechanical propulsion of the blood.

Moreover, it is well known that in all cases of movement of fluids in tubes, the portions of the fluid in the axis of the tube move with a higher velocity than the portions nearer the walls of the tube. By Hering's method, however, it is this highest velocity alone which is measured; his results cannot, therefore, be applied to the solution of the question as to how often the entire mass of blood passes through the heart, or, in other words, how often in any given time the venous blood becomes arterial.

Since writing the above, my attention has been called to an abstract of a paper by Drs. W. H. Howell and F. Donaldson, Jr.,* on the "Maximum Volume of Blood sent out by the Left Ventricle in a Single Beat, and the Influence of Variations in Venous Pressure, Arterial Pressure, and Pulse-Rate on the Work done by the Heart." In this paper they give the results obtained on the heart of the dog isolated after Professor Martin's method. Some of their conclusions seem to be at variance with the results described in my paper; but, as the detailed account of their experiments has not yet been published, this discrepancy may be merely apparent.

INDEX MEDICUS FOR 1884.—The publisher announces his intention of carrying on the *Index Medicus* for one year longer.

* Proceedings of the Royal Society, No. 226, 1883.

A READY METHOD FOR THE DETECTION OF THE BACILLUS TUBERCULOSIS.

BY M. B. HARTZELL, M.D.

SINCE Koch first announced the discovery of the bacillus tuberculosis, methods for its detection have multiplied rapidly. Most of these methods, however, are more or less complicated, are uncertain, and require too much time in their execution to be of use clinically.

On account of its simplicity, and of the short time required to execute it, I wish to add another to the many staining processes already in use. This process appears to me to possess decided advantages over all others with which I am acquainted: by means of it the sputa of patients who are supposed to be tuberculous can be easily and rapidly examined, and the bacilli are so deeply stained that if any are present in the specimen under examination they cannot be overlooked, if ordinary care is used. The process is briefly as follows. A small quantity of sputum is spread as thinly and evenly as possible upon an ordinary glass slide; it is allowed to dry, which takes but a minute or two, and is then passed slowly several times through the flame of an alcohol lamp or Bunsen burner. One or two drops of the fuchsin solution, recommended by Gradle, and prepared as follows,—carbolic acid, $\mathfrak{M}\mathfrak{xv}$; distilled water, $\mathfrak{f}\mathfrak{3ss}$; dissolve, and add saturated alcoholic solution of fuchsin, $\mathfrak{f}\mathfrak{3ss}$,—are placed upon the sputum thus prepared, and allowed to remain from three to five minutes. The slide is now washed thoroughly with distilled water, to remove the excess of fuchsin, and the stained sputum completely decolorized by means of a saturated solution of oxalic acid. It is again thoroughly washed in distilled water, after the decolorization, and allowed to dry: it is now ready to be mounted in glycerin or balsam for examination. With a power of five hundred or six hundred diameters the bacilli will appear as brilliant red rods, no staining of the background being necessary.

In all other methods with which I am familiar, the decolorizing agent employed is dilute nitric acid; but this, besides being disagreeable to handle because of its corrosive and staining properties, is apt to remove the color from the bacilli too, unless great care is taken. Oxalic acid, how-

ever, seems to leave the dye untouched in them.

To render the process still clearer, the different steps may be arranged thus:

1st. Spread the sputum upon the slide, dry, and pass through the flame of the lamp.

2d. Stain with the fuchsin solution three to five minutes.

3d. Wash in distilled water.

4th. Decolorize with oxalic acid.

5th. Wash again thoroughly in distilled water, dry, and mount in glycerin or balsam.

3721 SPRING GARDEN STREET, PHILADELPHIA.

REPORT ON RECENT PROGRESS IN GYNÆCOLOGY AND OBSTETRICS.

DEVELOPMENT OF UTERINE MYOMATA.

KLEINWACHTER* considers that the process of development of uterine myomata is not yet satisfactorily known: it is not probable that it is the result of hypertrophy of muscular fibres, but the round fibres are transformed into fusiform fibres which cannot be distinguished from muscular fibres. The matter of inquiry is to learn if the round cells are derived from the connective tissue or from the division of the cells of the muscular tissue. Small tumors are better for study, because in the large ones the development is complete, or else it is difficult to find points in which it is in progress. The author has found pure myomata or fibro-myomata in which the connective tissue is in excess of the muscular tissue, but he has never found a pure fibroma. The fasciculi cross each other in every direction, and lie closer together than in the normal state, and the cells and nuclei are a little larger and longer than in the non-gravid uterus. The myoma is generally distinctly separated from the neighboring tissue because of its connective-tissue capsule, or the direction which the fasciculi of its structure follow.

The author believes that many of these tumors are arrested in their development, although it cannot be claimed that this arrest is final. In case of multiple tumors, each has its capsule of connective tissue, or a thick layer of normal muscular tissue. Kleinwachter has never seen new vessels

* Zeitsch. f. Geb. und Gyn., ix. 1; Annales de Gynécologie, December.

in a myoma; but he has seen them in a fibro-myoma.

CASTRATION OF WOMEN.

In a recent paper by Tauffer,* the author presents the following conclusions:

1. This operation, made with proper precautions, does not present great dangers; the inevitable mortality is only ten per cent.

2. Make it under spray: close the abdomen; drainage only exceptionally necessary.

3. The patient's being near the menopause is not a contra-indication, for it cannot be predicted when the menses will finally cease.

4. It is not possible to follow the rule of Hegar,—that is, that the ovaries must be accessible to palpation.

5. Double ovariectomy is to be done, even when the second ovary is not diseased, save in exceptional cases.

6. Remove the oviducts if they are diseased.

7. Hystero-epilepsy is curable by castration.

8. The symptoms of which the association has received the name of hysteria are in many cases to be attributed to an ovarian malady.

9. The question of ligating large nutritive vessels passing to a fibro-myoma is worthy of consideration.

10. As to prognosis, it is probable that the menopause will promptly follow the operation, except when the neighboring organs have become inflamed; such inflammations delay the critical age.

11. The result cannot generally be judged until some months after the operation.

12. The question of the influence of diseases of the genital organs upon certain psychoses is matter of study.

13. The same is true as to the effect of castration upon the psychoses.

14. For our instruction, it is desirable that the cases of castration may be classified according to the plan proposed by Hegar.

THE INFLUENCE OF PUERPERAL EPIDEMICS UPON THE TIME OF LABOR.

M. Hervieux† made a communication to the Académie de Médecine, in which he

remarks that a certain number of pregnant women are susceptible of contracting a puerperal septicæmia which sometimes causes premature labor, and this septicæmia may be developed, with all its characteristics, after the premature expulsion of the foetus. But these familiar facts were regarded as exceptional. On the other hand, Hervieux holds it to be exceptional that when a pregnant woman is in an infected atmosphere she is not infected. He had been led to this conclusion by statistics taken at the Maternité during twelve years. By these statistics it is shown that premature labors were in proportion to the intensity of puerperal affections. With improvement in the sanitary condition, the number of premature labors and of maternal deaths underwent a corresponding diminution. In his treatise on abortion M. Garimond has asserted infection and contagion as very probable causes of abortions, without, however, giving the clinical proof, and this proof is now made by Hervieux. The longer a pregnant woman sojourns in an infected medium, the greater the liability to premature labor; and therefore in a time of an epidemic every maternity should be closed, and, no epidemic existing, pregnant women ought not to be admitted until as near as possible to labor.

A theoretical consequence is obvious, and that is that the placental wound is not the avenue of entrance of the puerperal poison, or at least the sole way by which it enters. In the pregnant woman the uterine cavity is closed, and consequently there is no internal surface comparable to a wound, no gaping mouths of vessels, and therefore no point accessible to the septic principle.

LESSENING THE DURATION AND THE PAIN OF NATURAL LABOR.

Dr John Morris, of Baltimore, discusses‡ the question as to means that can be judiciously used to shorten the term and lessen the pain of natural labor. Dr. Morris advises, when the first stage of labor is slow, and interference advisable from the delay, or from other cause, detaching by means of the finger the membranes from around the cervix. If premature rupture of the membranes occur, dilate the os with the finger, carefully swept round it during a pain. Where delay in dilata-

* Zeitsch. f. Geb. und Gyn., ix. 1; Annales de Gynécologie, December.

† Archives Générales, December.

‡ Journal of the American Medical Association.

tion is caused by rigidity of the os, morphia hypodermatically, or opium by the mouth. In unequal spasmodic contractions, use Braun's colpeurynter. If, the os being moderately dilated, the cervix is narrowed like a band, use Barnes's dilators.

According to Dr. Morris, though the os may be pretty well dilated, labor may be delayed by the firmness, dryness, and want of distensibility of the vagina: in this condition he advises copious injections of hot water, and, if this should fail, introduce a cotton tampon saturated with glycerin and lard. If inertia is present, one or two drachms of fluid extract of ergot are given; when there is arrest of the head from an occipito-posterior position, the forceps is needed. When the head is in the pelvic cavity, and the os dilated, it may be, only to the size of half a dollar, and the labor is lingering, rupture the membranes, draw the os forward during pain, and use strong external pressure. The author remarks, "Ergot is not generally necessary in this condition, but if the pains are ineffectual its administration is most beneficial,"—advice the latter part of which, the reporter begs leave to suggest, almost justifies the radicalism shown by some of the members of the American Gynecological Society at its last meeting, who thought it would be a blessing if ergot were banished from obstetric practice. When the head has descended to the perineum, and the labor lingers, ergot and external compression; but if delivery does not take place speedily, the straight, Beatty forceps.

ATTENTION REQUIRED WHEN THE LOCHIAL DISCHARGE IS NORMAL.

A very interesting paper by Dr. Eustache, entitled "*Études sur les Lochies dans l'État normal et les États pathologiques*," has recently appeared in successive numbers of the *Archives de Tocologie*. We present an abstract of the directions Dr. Eustache gives as to the care of the lochia when this discharge is normal:

The accoucheur ought to inquire as to the number of napkins used since his last visit: he learns the abundance, the color, and the odor of the lochia. If the flow is too abundant, if blood continues beyond the third or fourth day, and especially if there be a decided odor to the discharge, his attention is to be directed to modifying these characters.

The genital parts are carefully washed

after delivery; this washing to be done with simple warm water, or with water containing a small quantity of carbolic acid. A napkin is placed over the vulva, and at the end of an hour changed for a clean one, and then a little less frequently as the flow lessens. Each time that the nurse removes the napkin she must be careful to wipe thoroughly the external parts, so that they may not remain soiled; she ought also to separate the labia, so as to free the vulval orifice of any obstructing clots. Morning and evening she will complete this toilet of the external genital parts by washing them with warm water, or, better, with warm water made aromatic by the addition of a little vinegar or cologne water.

The accoucheur ought to see that there is a free discharge of the lochia, guarding against the retention of clots in the vulva or in the vagina, and direct that the napkin shall not be so closely applied that it acts as a plug. Position ought to be made to intervene to assist the lochial flow. Except in some cases of post-partum hemorrhage, or of threatened syncope, it is always preferable for the patient to be in a slightly-inclined position; that is to say, let the head and upper part of the trunk be raised somewhat by pillows, for the purpose of favoring by gravity the flow of the lochia, thus avoiding their accumulation and remaining in the vagina. The patient may usually be allowed to turn from one side to the other, either in eating or in nursing her infant. From the second day she may take her meals in a sitting position: the vagina will thus be naturally emptied of its contents.

It ought to be remarked that the most dependent part of the genital organs is not the vulva, but rather the deep part of the vagina corresponding to the neck of the uterus; and that the neck is very frequently the seat of rents, and if it is constantly bathed in the lochia it may be the medium of septic absorption. In surgery we use drainage-tubes to favor the flow of pus; in obstetrics the parts are sufficiently disposed to spontaneous drainage, provided absolute immobility is not observed. Vaginal injections are not employed unless the lochia have a decidedly bad odor. Dr. Eustache then uses carbolized water; but he remarks that he looks upon the injection as detersive rather than antiseptic.

If the flow does not cease to be red the third day, especially if it continues red the fourth and the fifth day, it is necessary to find out the cause; and generally it will be found to depend upon imperfect retraction of the uterus. Under these circumstances, ergot is to be given by the mouth; ergotin hypodermatically is objectionable, for it may cause erysipelas. It is almost a rule that the first getting up, especially when it takes place about the seventh or the eighth day, is followed by a return of the red flow. This phenomenon tells us that the retraction and restoration of the uterus are far from being complete, and is an indication for rest in bed.

When the lochial discharge is prematurely diminished or suppressed, this condition is not in itself an indication for therapeutic means. While this suppression is not to be regarded as a primary morbid state, and therefore efforts to recall the flow are to be condemned, therapeutics should be directed to the different morbid states, to the various local or constitutional maladies which may exist.

Retention of the lochia may result from spasmodic closure of the os uteri, or from cedematous swelling of the labia majora and of the nymphæ. An examination with the finger will readily detect the retention from the latter cause, and the flow is thus readily restored.

NON-PUERPERAL PELVIC LYMPHADENITIS AND LYMPHANGITIS.

Dr. Mundé* has an interesting paper having this title. He rests his diagnosis of the affection described on the shape, size, tenderness, mobility, and number of the nodules, on their relation to the uterus (not being directly connected with it, but still not entirely independent of it), on a condition of the uterus which might readily produce inflammation or enlargement of the adjacent glands, the mobility of the uterus, and, finally, on the acknowledged presence of some lymphatic glands and numerous lymphatic vessels in the connective tissue surrounding the supravaginal portion of the neck. Dr. Mundé states that the points he desires to make in his paper are the following:

1. That an inflammation of the pelvic lymphatic glands and vessels occurs in the non-puerperal state far more frequently than is generally supposed.

2. That such inflammation generally becomes chronic, and very closely simulates so-called chronic pelvic peritonitis and cellulitis, both in symptoms and in physical properties.

3. That such lymphatics in a state of chronic inflammation possess certain characteristic features which permit their recognition by the examining finger.

4. That this inflammation may either depend on and be secondary to uterine disease, or be entirely confined to the lymphatics and be apparently idiopathic.

5. That the treatment resembles that of chronic pelvic inflammation, with one exception,—the primary necessity for the removal of the focus of irritation, if such exist, before the lymphatic inflammation can be permanently removed.

INFLUENCE OF DIPHTHERIA UPON PREGNANCY.

Dr. Auguste Ollivier,† at the conclusion of a paper upon this subject, observes that diphtheria may be a cause of abortion, and therefore when it occurs in a pregnant woman may have exceptional gravity. The abortion is due, in a large number of cases, not to asphyxia or to the high temperature of the blood, but to an alteration of this liquid which, though badly defined, cannot be disputed. The possibility of abortion, with its dangers, therefore, suggests the importance of isolation when pregnant women are in a ward where diphtheria occurs.

OBSERVATIONS UPON THE PATHOLOGY OF PREGNANCY-VOMITING.

Dr. Griswold,‡ after considering the various theories of the vomiting of pregnancy suggested by Hewitt, Bennett, Sims, Copeman, and others, holds that the opinion that this disorder is caused by uterine deviations from a healthy condition is not correct. He regards the fact of pregnancy as the cause in the vast majority of cases, and says that "the practitioner who loses sight of this old view in his study of the newer lights may be led into unnecessary errors of surgical treatment in a great many cases which would be much more sensibly cared for by easier and more agreeable means."

T. P.

* American Journal of Obstetrics, October.

† Archives Générales, October.

‡ Louisville Medical News, December.

TRANSLATIONS.

THE ANATOMICAL CAUSES OF HERPES ZOSTER.—Lesser reports the microscopical appearances found in the post-mortem examination of a third case of herpes zoster, in which he was able to confirm the statement, based on two previous cases, that the disease is a consequence of nervous disturbance. In this case, during life the herpes was situated in the distribution of the fifth, and partly of the fourth, right intercostal nerves. On post-mortem examination, the fifth intercostal nerve was strikingly thinner than normal, flattened, and of a transparent reddish-gray color, forming a strong contrast to the white of normal nerve-tissue. Similar changes were found in the fourth intercostal nerve, but less marked than in the case of the fifth. Microscopic examination showed that numerous fibres of the fifth intercostal nerve had undergone degeneration, and that the fifth intercostal ganglion had in its upper half lost its normal structure, the nerve-elements being replaced by connective tissue. Similar changes, though less marked, were found in the ganglion-cell and fibres of the fourth intercostal ganglion, though no degenerated fibres could be found in the corresponding nerve.

In relation to the connection between the nervous lesions and the skin affection, the author believes that, either through the irritation of certain nerves or from their loss of function, microscopical points of necrosis form in the deeper layers of the skin and then extend to the surface, and that reactive inflammation follows as a consequence of this necrosis.—*Centralb. f. d. Med. Wissen.*, December 1, 1883. S.

THE ETIOLOGY OF TABES DORSALIS.—In the study of his second hundred of cases of tabes dorsalis, Prof. Erb makes the following statement as regards the etiology of this disease. Of these cases there was only nine per cent. in which previous syphilitic infection could not be proved; with positive secondary syphilitic symptoms, sixty-two per cent.; with chancre, but without definite secondary symptoms, twenty-nine per cent.; or, in all, ninety-one per cent. of these cases possessed a syphilitic history. In relation to the time elapsing after syphilitic infection before the appearance of tabes, he found that in sixty-nine of these ninety-one cases tabes appeared

within fifteen years after infection, in fifteen cases in the following five years, and in only six cases later than this. In a control examination of twelve hundred men over twenty-five years of age who had no symptoms either of tabes or of syphilis, he found 77.25 per cent. uninfected and 22.75 per cent. infected in early life. From this it follows, according to the author, that almost no one becomes tabetic who has not first been syphilitic. Of thirteen tabetic females, four were free from syphilis, in three it was doubtful, four had had positive secondary syphilitic symptoms, one probably syphilitic, and one a chancre. From the above Prof. Erb concludes that syphilis is one of the most frequent causes of tabes dorsalis, if not the most frequent.—*Centralb. f. d. Med. Wissen.*, December 15, 1883. S.

WOOD-WOOL AS A SURGICAL DRESSING.—Under this name Bruns recommends as a surgical dressing the fine fibrous scrapings obtained from wood-polishing factories. For surgical purposes the scrapings of white pine are the best. When in the fresh condition it contains from sixty-five to seventy-five per cent. of water, and it must, therefore, before use be pressed, powdered, and dried. As prepared by Hartmann, in Heidenheim, it is extremely soft, very porous, and fulfils all the requirements of a capital dressing for surgical cases. One of its great advantages is its immense power of imbibing fluids, it being able to absorb twelve times its weight of water, while the turf recommended by Neuber takes up only eight times its weight, and even then requires to be first moistened. It is, moreover, extremely cheap, fresh, absolutely clean, of a white color, and is indeed an ideal "dry dressing." It may also readily be impregnated with the different antiseptics: of these the sublimate is recommended, and is furnished by Hartmann containing one-half per cent. sublimate and five per cent. glycerin. This preparation is now exclusively used in the Tübingen Surgical Clinic, and is preferred by Bruns to carbolic acid or any other antiseptic.—*Centralb. f. d. Med. Wissen.*, December 15, 1883. S.

THE USES OF IODOFORM IN GENERAL SURGERY.—The report of the service of Prof. von Mosetig-Moorhof (*Bericht des k. k. Krankenhauses Wieden vom Solarjahr 1882*) shows that during the last five years

he has treated altogether seven thousand cases with iodoform, and he states that he can see no reason for giving up its use. He has sought in vain for toxic symptoms in any of his cases. He uses it as (1) a powder, *not* in crystals, sometimes employing (2) iodoform gauze (50 per cent.), and in the form of (3) an emulsion composed of from 5 to 25 parts of iodoform, 50 of glycerin, 10 of water, and 0.25 part of gum tragacanth. The latter is especially useful in punctured wounds and complicated fractures. In thirty-five such fractures there was only one which presented septicæmic symptoms. He also uses (4) iodoform crayons, and (5) iodoform solution for parenchymatous injections. The solution he uses is as follows: iodoform, 1.0; benzine, 9.0; paraffin (liquid), 10.0; oleum gaultheriæ, gtt. ij. This is especially serviceable in lymphadenitis and parenchymatous struma. Local tuberculous processes can be treated by this solution after all the diseased parts have been carefully removed. In a table of eighty capital operations treated by iodoform dressings remarkably good results are shown.—*Centralblatt für Chirurgie*, No. 48.

TREATMENT OF ERECTILE TUMORS IN CHILDREN.—After unsatisfactory experience in the treatment of erectile tumors in children by means of vaccination, thermocauterization, and cauterization with the Vienna paste, Dr. de Saint Germain recommends as the most satisfactory the injection of the tumors with Piazza's solution. This consists of chlorinated soda, fifteen parts, liquor ferri sesquichloridi (thirty per cent.), twenty parts, and water, sixty parts. Through this injection a coagulum of the blood in the tumor is produced, and the growth shrivels up. It is necessary to be careful that none of the injection enters the normal tissue, or violent inflammation will be produced. Occasionally, however, this method of treatment will fail: resource must then be had to some caustic paste, or to the antiseptic excision of the tumor.—*Centralb. für Chirurgie*, October 13, 1883.

TUBERCULOSIS OF THE VAULT OF THE PALATE.—Out of three hundred to four hundred cases of tuberculosis which come annually to Guttman's clinic, he finds that only one per cent. is affected by tuberculosis of the vault of the palate and

its adnexa. Lublinski has met with only ten cases out of a total of sixteen thousand patients seen in five years; although twenty per cent. of all of these were affected by disease of the air-passages, and it was always in those patients in whom the tuberculosis of the lungs and larynx was very far advanced that he saw this complication. Guttman states, in answer to the possible criticism that many cases may escape unnoticed, that this is scarcely possible, on account of the pain caused by the disease, and especially the difficulty in deglutition.

As to the etiology of the affection, these two authors endorse the opinion of Rindfleisch that tuberculosis of the larynx is occasioned by the expectoration, and in like manner is the vault of the palate affected. As a primitive disorder the disease does not exist.—*Deutsche Med. Zeitung*, No. 19, and *Revue Mensuelle de Laryngologie, d'Otologie et de Rhinologie*, December.

THE MICROBE OF HYDROPHOBIA.—At the Academy of Medicine (November 27) Pasteur referred to his discovery, in the saliva of a child who had died of hydrophobia, of a microbe susceptible of cultivation and of inoculation in guinea-pigs, causing their death, and stated that after culture-experiments it could be introduced into rabbits without fatal results. The experience of Pasteur has shown in regard to microbes in general that a disease-virus is not a morbid entity, and although virulence belongs as a property to some species of micro-organisms, it is modifiable essentially: it can be increased, it can be reduced, and each of these states is capable of fixation by culture. He stated that microbes which are virulent in one animal may be harmless in another, and the virulence of the poison may be very much modified by its passage through several animals of the same species.—*La France Médicale*, No. 64.

LOCAL TREATMENT OF ERYSIPELAS.—An epidemic of fifty cases of erysipelas gave Polyányi an opportunity of making comparative observations of different methods of treatment. The best results were given by applications of freshly-prepared sulphurous-acid solution, made carefully every two hours over every part of the affected surface. J. Andeer prefers a fifty to eighty per cent. ointment of resorcin.—*Wiener Med. Presse*, Nos. 22 and 23.

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, JANUARY 26, 1884.

EDITORIAL.

REMARKS UPON MEDICAL EXPERT TESTIMONY SUGGESTED BY THE DWIGHT CASE.

THE prominence which has been given to medico-legal questions in the recent case of Colonel H. J. Dwight, of Binghamton, warrant a reference to it here in order to emphasize a few remarks upon medical experts and the character of expert testimony. An extended history of the case will not be required by our readers, who are familiar with the details as they have appeared in the public prints: stated in its briefest form, it was that of a man who as a result of large speculations had become a bankrupt, and who, while supporting his family extravagantly upon borrowed money, had made application to nearly every life-insurance company in the United States for insurance upon his life, and, in fact, had actually obtained policies aggregating nearly four hundred thousand dollars, upon which he had paid the first quarterly premium with money borrowed for the purpose. As he was without income, it happened very opportunely that he died rather suddenly on November 15, at a time when he was alone in his room. The death, indeed, was timely, because he had just been successful in passing through bankruptcy, and also because in a few days the second quarterly instalment would be payable, which he had no funds to meet, and failure would involve forfeiture of the money which he had already paid. The insurance companies contested the claim on account of fraud, on the ground that Colonel Dwight had committed suicide; but it was also in evidence that his replies to some of the

questions in his application for the policies were false and misleading. The original theory of the plaintiffs was that the man had killed himself with gelsemium; but the experts were agreed in attributing death to strangulation with a cord, marks of which were plainly demonstrable both at the first post-mortem and at the second, performed four months later. The dissenting testimony (as we gather from a critical review of the case by Dr. H. C. Wood in the *Medical News*) was confined practically to Drs. Hyde, Burr, Chittenden, and Orton, Mr. Ayres, the undertaker, and two other non-medical gentlemen, who believed the creases in the neck to have been caused by forcibly flexing the head after death, when placing the body in the ice-box. None of these medical gentlemen, however, who were called upon the part of the plaintiffs (*i.e.*, executors of Mr. Dwight), ventured to assign a natural cause for the death, or to deny the alleged strangulation. Dr. Swinburne, who made the autopsy, Drs. Porter, Bridges, and Sherman, and the experts called in by the insurance company to investigate the theory of supposed poisoning,—Dr. Austin Flint, Jr., of New York, and Drs. Roberts Bartholow, Theodore G. Wormley, Isaac Ott, and H. C. Wood,—were unanimous in the conclusion that death had been due to strangulation, probably by the patient hanging himself to the bed-post. Notwithstanding the able and positive medical testimony, the verdict was given against the life-insurance companies, who have since appealed the case in the interests of public morality and as a measure of protection to the funds belonging to the other policy-holders, of which they are the trustees.

It was peculiarly unfortunate that, before the case had been finally decided, an editorial attack should have been made upon the expert testimony in the *Medical News* (December 22), which claims that the view held by the experts at the trial was erroneous, and that death was caused by the

combined effects of disease and large doses of morphia administered by the attending physician, Dr. Burr. The death by asphyxia was not denied, nor that "he suddenly and without premonition sunk away and died;" but death is attributed to the effects of morphia, in the face of the facts that he had been doing well and talking rationally—according to the testimony of Mr. Hull, who sat up with him—up to within a few moments of his death, and that his heart-tissue was pronounced healthy in the report to the court.

It would be very unusual, to say the least, to find a *hypodermic injection* of morphia, given not later than half-past nine in the evening, exercising suddenly, two hours later, a fatal paralyzing action upon the respiration and heart, without being preceded by any evidences of narcosis or other of the classical symptoms of morphia-poisoning, which are so easily recognized. Moreover, there was no evidence to show that the hypodermic injection was in excessive dose.

We pass without comment the reflection which the editorial alluded to casts upon the character of the attending physician, who, according to this view, made himself *particeps criminis* by contributory negligence, if not by design, as this reflection may lead to legal proceedings which will still further elucidate the peculiar etiquette of expert practice in this country.

We take this occasion to affirm our convictions that medical men who are summoned as experts do not thereby relinquish their right of independent judgment, or their freedom in declaring their views in court upon the questions submitted for their consideration by either side: due respect to themselves, and to the medical profession which they represent, should restrain them, therefore, from allowing themselves to be placed in the attitude of partisans. In declaring "the truth, the whole truth, and nothing but the truth," they are aiding the cause of justice: no obligation

should be assumed that would commit them to any other course or oblige them to do less than their duty. Again, experts are selected as especially qualified to decide upon certain difficult medical questions coming up for consideration in the course of the case. Does it not seem inconsistent with this view, as well as undignified, for eminent men, who differ in their views, to appeal to the profession at large, or seek a rehearing of the case at the bar of public opinion? The world has not yet recovered from its disgust at the character of the testimony and behavior of the medical experts at the Guiteau trial, in which scenes occurred that have reflected lasting discredit upon American medicine. The public will begin to have more respect for the medical profession when the leading members of the profession show more respect for themselves.

REMARKABLE RESTORATION OF VISION FROM INJURIES TO THE HEAD.

THE case of Mr. Maybee, of Long Island, has attracted considerable attention and has led to some discussion. The patient had been a sufferer with spinal disease for fourteen years, and became totally blind about a year ago. He was an invalid, and advanced in years. While sitting in his chair one afternoon last November, he was beaten about the head by burglars, who also murdered his wife and daughter. He was naturally under great excitement at the time, and lost considerable blood from scalp-wounds. Strange to say, a few days later he commenced to recover his sight, until he could distinguish different individuals, although vision was not quite clear. His general condition was fair, and his pulse good.

The opinion of Dr. Knapp, as published in the *New York Herald*, is that the patient might have had advanced cataract, and that, the fastenings of the cataractous

lens becoming broken up by the blows upon the head, his vision was partially restored. The newspaper suggestion that the injuries had any effect upon the optic nerve is rejected as untenable.

That loss of vision, with the appearances of atrophy of the optic nerve, may be due to sudden fright or shock, is generally known. Central scotoma likewise may be developed from inanition during an enfeebling general illness, and also from the use of tobacco. Now, since these conditions have been relieved by various methods of treatment, and in some cases vision has been restored quite unaccountably, we should not reject too positively the hypothesis of the combined influence of concussion, local hemorrhage, and cerebral excitement in restoring vision in the case under consideration.

It is true that advanced spinal disease is apt to be accompanied by optic neuritis; but, in the absence of a record of the case previous to the injury, it cannot be said positively whether the eye-symptoms were complications of the spinal affection or existed independently of it. Before denying that any given agent can be useful in benefiting optic atrophy, it would be well to try and explain why strychnia is sometimes of such signal value. Dr. David Webster, of New York, in a communication to *The Planet*, reports a case of this kind in a stable-man who was so blind that he had to be led to the hospital, but who, under the use of strychnia hypodermically, recovered the sight of both eyes so as to be able to read fine print, the appearances of atrophy of the optic nerve being retained, although sight was restored. Other cases are reported cured by electricity and by electro-magnetism.

Dr. Webster stated that the blows upon the head of Mr. Maybee must have powerfully affected his nervous system, and to this shock and to the sudden intracranial changes induced by his great fright and mental excitement, in his opinion, may be

attributed the change in the nutrition and conducting power of his optic nerves, and the partial restoration of sight.

DISASTROUS CONSEQUENCES OF NERVE-STRETCHING.

THE dangers of the purely empirical treatment of obscure nervous disorder by the process known as nerve-stretching have been pointed out recently by several observers with sufficient emphasis to lead to caution in the practice of a method which has no scientific basis, often fails to relieve, not infrequently inflicts injury upon the patient, and may even be followed by fatal results.

Westphal reports* the case of a man, aged 31 years, who suffered from a slowly-progressive loss of power of the lower extremities, associated with spastic phenomena, involuntary contractions, increased reflex irritability, exaggerated knee-reflex, and disturbances of sensation. This last symptom was particularly marked as regards the perception of differences of temperature. It extended over the legs and body, and varied at different times. After vigorous stretching of the right crural nerve, the muscular stiffness and knee-reflex disappeared, the latter temporarily, while incontinence of urine and fæces, contraction, and bed-sores were added to the other symptoms. These symptoms gradually increased in severity, and, after an intercurrent right-sided hemi-anæsthesia and ataxia, death occurred three years after the operation. On post-mortem examination, circumscribed points of degeneration were found in the brain, pons, and medulla oblongata, with diffuse softening of the cerebral and dorsal portions of the spinal cord (most marked in the middle dorsal region), with multiple points of degeneration in the right half of the lumbar cord. The process, therefore, was one of chronic circumscribed cerebral degeneration.

* Centralb. f. d. Med. Wissen., December 1, 1883.

tion, associated with diffuse spinal degeneration; and the author believes that the disease in the right half of the lumbar cord was without doubt a consequence of the stretching of the crural nerve.

The author also reports a case of spastic spinal paralysis, in which nerve-stretching produced a temporary improvement in some of the spastic phenomena, without, however, resulting in any perceptible permanent benefit.

LEADING ARTICLES.

THE NORTHWEST AS A HEALTH-RESORT.

IN Dr. Wood's article on "The Southwest as a Health-Resort" are presented claims that are equally shared by some sections of the Northwest, notably Montana. It is within the dry belt of the Rocky Mountain regions, and in this particular has possibly the same influence that Texas has, being quite as dry, and moderately elevated. There are here two seasons wherein are frequent rains, one of four to six weeks in late spring, and another of one to two weeks in fall, corresponding to the equinox of the Eastern States. Infrequent showers occur during the year, and snows during the winters, though often a whole season passes without enough to make sleighing; this, of course, in the less elevated sections, for on some high plains and on the mountain-ranges are deep snows throughout the winter. This section of the country is, strictly speaking, a desert land, as defined by the statist, where the farmers must irrigate to raise crops,—a land where dew never falls, where one can lie or sleep on the ground without taking cold, and where dust follows the traveller at all seasons alike.

The amount of rain-fall, as registered in the Helena signal-office for 1882, is 6.8 inches, which includes the melted snow.

The dryness of the atmosphere here is appreciable in every-day life. The dead bodies of small animals, such as cats, dry up with little or no inconvenience attending disintegration. Before our town was incorporated, their carcasses were never carted away, and in alleys and dark places they were often a stumbling-block. The

hunter, resting beneath a tree, may hear the creaking joint of the Sioux Indian—the *good Indian*—resting on the branches above, but no tainted atmosphere directs his attention to the mausoleum. Indeed, it seems to be a country where one may dry up and blow away.

The average altitude of Montana is three thousand feet, while that of Colorado is seven thousand, of Wyoming six thousand, of New Mexico five thousand six hundred. This slight elevation, with the warm western winds of the Japan current, gives us a comparatively mild climate. "The isothermal line of 50° F., passing through Harrisburg, Cleveland, and Chicago, runs from southwest to northeast through the Territory. Our mean temperature is that of Pennsylvania and Central Ohio."

There are severe and sudden changes; but can we say less of Texas? Are we sure these changes are deleterious to health? I have heard visitors to Lower California complain that the regular, even temperature there was tiresome and monotonous and caused one to grow languid and dull.

Professor Wood compares Texas and Colorado, and justly pronounces in favor of Texas. The elevation of Colorado is too great. The result is, cold severe winter; but a more serious effect is that the great high spurs and peaks of its mountains are continuously covered with snow, and during the summer sunshine this snow melting loads the atmosphere with moisture, the evaporation creates such conditions that regular daily breezes sweep down over the plains, and the population is injured rather than benefited. Established lung-irritation is increased, and nasal catarrh is made common. Montana is free from this condition, and allows nothing in favor of Texas. Nor is the difference in elevation less in our favor. Coming from the sea-level, one finds his lung-capacity a little wanting in our rarefied atmosphere, but in time his lungs grow up to the requirement and no extra work is called for. The travelling clothier tells me the chest-measure of the old-timer is very positively above that of the man in the States, and percussion over the heart's area reveals so much covering of lung-tissue as to make the usual dulness almost wanting. So striking is this to the pilgrim doctor that he hesitates to accept such order of things.

In cases that have a loss of lung-tissue so

great as to reduce the supply of necessary oxygen, it is questionable if benefit is afforded by coming to an elevated region. Some sudden deaths attend such patients coming here; yet we have witnessed some such remarkable recoveries as to make us slow to discriminate. As to a special proneness to hemorrhage, it is purely theoretical, for it does not exist. In no branch of practice or disease is hemorrhage more common in our town than in the States. I was taught, and saw demonstrated by apparatus, that patients with emphysema of the lungs wanted condensed air: up here in our rarefied, sparse air we seldom meet the disease, while asthma invariably deserts the patient on the route.

In the cases of inherited consumption the positive lung-growth acquired in our elevation is one of the special favors bestowed. The numerous cases that life on the plains has cured are due more to the increased lung-expansion and final growth than to simple exercise and fresh air.

It seems established as a fact that dry air or a dry climate is favorable for lung-diseases. It is likewise assumed that a warm climate is better than a cold one. This is not proved. Do not consumptives complain of hot weather, of languor and debility? Do not consumptives who reside in and about Philadelphia die most commonly close on an exhaustive summer at "the falling of the leaves"? Does real cold weather produce any ill results, or are the patients any worse during such terms? Our mortality list shows, for the three past years, one consumptive death for January and December to four deaths for August and July. Can Dr. Wood on theoretical or practical grounds advise that the comfortable winter weather and hot summer weather of Texas are better than the cool comfortable summer and the cold winter of Montana? In the mortality report of Helena, of six thousand inhabitants, for 1882, I find that during July, August, and September there were two deaths from all causes; none of children or from disease due to heat.

January and February had, respectively, twenty-four and twenty clear or fair days, such as invalids could exercise in: our roads being almost always dry, they can go out at all times. If it is not an established fact that warm dry air is better for consumptives than cold dry air, I should like to invite the attention of the profession to the North-

west as a health-resort offering more inducements than the Southwest. I do not include in this Minnesota or any of the Northwestern States,—there they have a moist atmosphere, and severe storms and winters,—but limit my call to Montana. We have only in part the diseases of the States, and with many modifications; no malaria, no asthma, little or no summer complaint; while we have hot springs for hygienic use, hunting for amusement, and mining, farming, and cattle-raising for employment. A *Helena Herald* item, of some numbers back, reads thus: "Dr. Blake returned from a nine days' hunt with twenty-two deer and one grizzly bear." In the suburbs of Helena is a hot spring of unlimited capacity at a temperature of 150° F., and identical with the Arkansas Hot Springs in chemical analysis; thirteen miles distant is a similar spring; forty miles is a famous hot spring; sixty miles is a hot sulphur spring; and thus throughout the Territory.

The Board of Health furnishes for Helena, Montana, from October, 1880, to April, 1883 (two and a half years), the following: Population, six thousand; number of deaths from all causes, one hundred and seventy-four; number of deaths from consumption, thirteen; mean age of deaths from consumption, forty-one years.

We are not entirely free from the disease, but the actual death-rate, I am sure, is less than the table. One case given was death from old age and intemperance, another was strictly syphilitic, one from strangulation due to an abscess of the lungs, one, tubercular laryngitis. One of our physicians died upon whom judgment was pronounced twelve years ago by eminent London physicians. Experience confirms a long-formed opinion that Montana Territory offers more inducements as a resort or home for consumptives than any other section. Our geographical position needs much allowance. One of our dailies, speaking of the severe snow-storms four weeks ago in Colorado, says, "Such a sad state of affairs has never existed in Montana, and there is no country, probably, in the world where the people are so free from the visitations of storm and flood, and where there is such exemption from the casualties incident to extremes of heat and cold." At this writing, December 15, the thermometer registers 25° F., and

it is one of a continuous succession of clear, sunshiny days from the 1st. Unless the winter prove to be an exceptional one, we shall have this same sunshine, clear, bright, calm days, and smooth, dusty roads, on through this month, and the next, and the next.

J. J. LEISER, M.D.

HELENA, MONTANA, December 15, 1883.

NOTES FROM SPECIAL CORRESPONDENTS.

NEW YORK.

GRAVE CHARGE AGAINST A MEDICAL COLLEGE.

SINCE the passage of the new law, the County Medical Society, through its Board of Censors, has undertaken the work of prosecuting persons illegally practising—or, rather, pretending to practise—medicine. E. C. Ripley, Esq., attorney for the Board of Censors, states in his annual report,—

"Thus it will be seen, by an examination of my report for last year and the present report, that this New York Eclectic College, within the last two years, notwithstanding the widely-published prosecutions of these men, their well-known characters, and the disgusting advertisements of some of them, has 'graduated' John Wesley Grindle, E. B. Light-hill, James Bryan, Adam Claesson, and William H. Fuller, and solemnly declared them to be fit men to practise medicine. It should be the first duty of every reputable physician to make known this shameful state of facts, and join your Board in bringing to justice men who have been engaged in this unprofessional and disgraceful affair." "This man Bryan is one of the most notorious quacks in this city. He has been connected with numberless swindles, and published far and wide in the public journals, and occupies a prominent chapter in Anthony Comstock's book 'Frauds Exposed.' His arrest by us was published in the city papers; yet, in the face of these facts, and while he was under indictment awaiting trial, he registered as *another* of the 'graduates' of the New York Eclectic Medical College."

We understand that the Board has since taken steps to have the charter of this college rescinded, on the ground of having illegally granted diplomas. In evidence of the good work done by the Board, Mr. Ripley says, —

"My observation prompts the remark that in no class of cases in the criminal courts is there as large a percentage of convictions as in the cases prosecuted by your Board; and the Board may well feel proud of this, another year's successful work, evidenced not alone by this report, but by the generous and merited support of the public press, and favorable public sentiment generally."

SANITATION.

The hands of politics seem again to have been laid upon the Board of Health, the result of which will probably be decreased efficiency in sanitary inspection. With the numerous shell-like buildings which are going up with almost lightning rapidity, certainly this is not desirable. It would not be difficult for Prof. Doremus to find plenty of walls here at the present time which would permit of the easy penetration of gases. Although the temperature very seldom goes down to zero, yet in the large majority of dwellings, especially those recently constructed, the occupants feel themselves obliged to allow the water to run from every faucet during the night, and often during the day, as a safeguard against freezing. If by accident this is neglected, the next day the plumber must be called to repair bursted pipes. No wonder, therefore, the need of greater water-supply. But, with the facilities which New York has for getting water, it might just as well as not have its streets constantly flooded, if necessary. As it is, the people who live above the second floor await the new Croton aqueduct with impatience.

DISPENSING DRUGGISTS.

Your recent editorial suggests that some steps might well be taken by the physicians of this city also towards checking the spread of life-destroying patent drugs, and that form of irregular medical practice cloaked under the uncertain terms "druggist," "apothecary," "pharmacist." On the avenues in this city one frequently sees as many as from two to three drug-stores in walking a single block. Some of them are limited to a room of about ten by twenty feet, are situated in the middle of a block for want of means to pay corner-rents, and perhaps have inscribed in golden letters on the windows the significant term "Smith's Dispensary," or its equivalent, and here ignorant people, and even some of the well-to-do financially, go for medicine that will relieve a cough, rheumatism, pain in the side, venereal trouble, etc., receiving the "doctor's" advice free, and paying anywhere from ten to seventy-five cents for the drug. These benefactors of the afflicted portion of humanity often sell a concoction said to be of their own patent, now that a revenue stamp is not required on such packages. If a patient happen to come in with a reputable physician's prescription for a bronchitis, they noise it far and wide among their customers, and put it up for every one who comes in with a similar affection. Even the better class of pharmacists repeat physicians' prescriptions without authority, and devote one-half the shop to innumerable patent medicines.

R. C. S.

January 10, 1884.

PATERSON, NEW JERSEY.

THIS city has become what it is mainly through geological changes in its site in ancient times. The formation of red sandstone bears upon its surface very considerable mounds and banks of sand, the remains of ancient shores which have been greatly wasted by glacial action. Along its western side the sandstone is overlaid by a heavy body of trap-rock, resulting from intense volcanic action. This is named "first mountain," as it is the first occurring from seaward, and extends far away in a pretty direct line through the counties of Essex and Union, to the heart of Somerset. Hither from the adjacent table-land of Morris County comes the feeble stream that forms the head-waters of the Passaic River, which, keeping within this range of trap, skirts it in a northerly direction, until, at a point some miles west of Paterson, it turns directly eastward, finding its way through this rocky barrier at a remarkable rift, down which it plunges a depth of seventy feet. The walls and columns of trap which form this singular chasm, into which the water falls with wondrous power, constitute a most picturesque scene. The river then sweeps away with a rapid current eastwardly, the city rising upon both its banks. At the falls, a low dam having been thrown across the river just above, are situated the city water-works. The water is forced by steam-power to a reservoir upon an adjacent hill, very much as at Fairmount in Philadelphia. At this point, also, is placed a viaduct, which furnishes water-power to certain mills and carries water for the boilers of the great locomotive-works which are near by.

The older portions of the city are meanly built, the main object, apparently, being to secure the largest amount of returns from the smallest outlay. Many tenement-houses have been constructed during the past year on this selfish principle, the result being dwellings deficient in light, ventilation, and the means of privacy and the decencies of life. The easterly part of this city is building up in a style altogether different. Here are rising palatial houses, the abodes of the rich manufacturers and wealthy artisans, who are lavishing large sums on the construction of their homes. The inhabitants represent nearly every nationality on the face of the earth,—the French, German, English, and Irish constituting the larger portion. Its character as a manufacturing city is seen at a glance when the great manufactories pour out their living tides upon the public streets,—jostling hordes, carrying in their countenances and rude behavior the stamp of low mentality which constant manual labor, unrelieved by culture, inevitably brings.

Perhaps no city of its size in the United States is so destitute of literature and reading as this one. There is no public library of

any description worthy the name. The only attempt in that direction is a motley collection of old books,—perhaps one hundred in all,—open once a week in the evening, in the basement of one of the churches. The opportunities for mutual or individual improvement to physicians are most meagre. The County Medical Society, while having upon its rolls upwards of forty names, cannot usually muster over a half-dozen members at a regular monthly meeting; and the details are uniformly uninteresting and unprofitable, consisting chiefly of routine business. All the sociability to speak of in the profession finds expression in an annual dinner at the leading hotel. The prevailing idea in the minds of most of the members appears to be business. This dominates all else. The facilities for the succor of the homeless sick and maimed consist of two general hospitals, and one infirmary for diseases of the eye and ear. The former two have been in existence about ten years, the last about one year. The St. Joseph's, or, as it is familiarly termed, "The Sisters' Hospital," was originated and is supported by a sisterhood of nuns, assisted by the Roman Catholic clergy and people. It is well located, and is large, airy, and clean. It has a staff of physicians and surgeons who attend alternately at such hours as are convenient to them. Only within the last year has it maintained a resident physician. The "Ladies' Hospital" was founded and is supported by voluntary contributions, the leading ladies of the town soliciting and raising funds for its support. It has an elevated position, with interesting views, and is kept in admirable order. The medical attendance is of the same character as that of the first-mentioned, a resident having been recently appointed. Unfortunately, at neither of the hospitals could I learn that there was any systematic record taken of the patients, the history of their diseases, or the methods and progress of the treatment. There are separate wards for medical and surgical cases of each sex, and separate rooms for scarlet-fever patients; but such diseases as erysipelas, diphtheria, and consumption are treated in the general wards. So far as I can learn, there are no books of reference in either institution,—the only medical literature available being a few text-books belonging to the residents, and a few copies of medical journals. Of the practice in the two hospitals, that of the Ladies', where I witnessed some good surgery, seemed the better. A colotomy and a cataract extraction—the last from the Eye Infirmary, which has a bed here—were skilfully performed. I was not present at any of the practice of the Sisters' Hospital, but close inquiry satisfied me that there was lack of system and thoroughness in the manner of investigating diseases, and a singularly ancient and unsatisfactory style of therapeutics.

In the line of sanitation the city has a Board of Health and an Inspector of Provisions, who are earnestly working for the preservation of the public health. They find abundant opportunity for the exercise of the functions of their office, in correcting the habits and practices of the filthy, the selfish, and the ignorant.

E. T. BLACKWELL.

CORRESPONDENCE.

HOMICIDE SECUNDUM ARTEM.

EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR DOCTOR,—I have read with much interest your editorial in the *Philadelphia Medical Times* for December 1, on "Homicide secundum Artem."

A few years ago, it happened in a New-England town that a physician attending a case of labor where a monstrosity was brought forth decided that the miserable child was unfit to live, and, after cutting the cord, having purposely omitted to tie either end, he allowed the child to bleed to death in his presence.

The case was reported at a meeting of the Medical Society to which this *executioner* belonged. One or two were in favor of taking active measures against such a high-handed and very unprofessional proceeding, but were somewhat held in check by reason of the opposition of a prominent member, who, if not very highly respected, was certainly much to be feared. I remember that I took the occasion to denounce such conduct not only as unprofessional but as actually criminal. You can understand that very few sympathized with me, when I tell you that upon a friend of this physician making a very slight apology for this proceeding, and extending an invitation for the Society to hold its next meeting in the town where he resided, *and to accept his hospitality and dine with him, the invitation was accepted.* A few, the writer among the number, felt that they could not, with any respect for the profession, accept the invitation under the circumstances, and stayed away. The enterprising host, however, was rewarded by being elected President of the Society. I felt somewhat severely punished for my meddling, and vowed that I would try to be more guarded in future. Is it not unworthy of the honorable profession of medicine, upon whose banners is inscribed the motto, "Our duty is to save, and not to kill," that there should be any doubt as to our procedure in such cases? We are responsible to the patient, to his friends, and to God for the most faithful performance of duty possible; and never should we consider ourselves placed in a position to exercise our judgment in opposition to his will.

In case a monstrosity is born, we are in duty bound to proceed by regular obstetrical usages, if not laws, to sustain life, trusting in God, "*to whom alone belong the issues of life and death.*" If our noble profession is to be degraded to the level of a trade, then, perhaps, we shall find men belonging to it in doubt as to whether we are sent to take life or to endeavor to save it. Thanking you for your valuable editorial, I am very truly yours,
A MEMBER OF THE MEDICAL PROFESSION.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a meeting held December 12, 1883, Dr. W. M. Welch, President, in the chair, Dr. Arthur V. Meigs read a paper entitled "Proof that Human Milk contains only about one per cent. of Casein: with Remarks upon Infant-Feeding."

In this communication the lecturer demonstrated, by the process of exclusion, from a series of analyses, that human milk does not contain more than about one per cent. of casein, as an average. He made the following practical remarks, in conclusion, upon "infant-feeding," and recommended the following method of preparing the food:

"The easiest way to prepare and use the food is as follows. There must be obtained from a reliable druggist packages of pure milk-sugar containing seventeen and three-quarter drachms each. The contents of one package are to be dissolved in a pint of hot water, and it is best to have a bottle which will contain just one pint, as there is then no need for further measuring. The contents of one of the sugar packages are put into the bottle, and when filled with hot water the sugar soon dissolves and it is ready for use. The dry sugar keeps indefinitely, but after it is once dissolved it sours if kept more than a day or two in warm weather: it is understood, therefore, that the sugar-water must be kept in a cool place, and if it should at any time become sour, as is easily discovered if it is smelled and tasted, it should be thrown out, and, after the bottle has been carefully washed with boiling water, the contents of a fresh package dissolved. A milkman must be found who will serve every day fresh, good milk and cream. By good milk is meant ordinary milk, such as is easily procured in most cities, and not rich Jersey milk; and in the same way the cream should be such as is ordinarily used in tea and coffee, and not the very rich cream of fancy cattle. The reason that ordinary milk and cream are recommended is because they are within the reach of almost every one, and not because they are any better than the rich milk of high-bred stock.

If Jersey milk were to be used, it would be necessary to analyze specimens and then make the necessary calculations as to how to dilute it to obtain the desired relative proportions of the proximate principles. When the child is to be fed, the nurse should mix together two tablespoonfuls of cream, one of milk, two of lime-water, and three of the sugar-water, and then as soon as the mixture has been warmed it may be poured into the bottle and the food is ready for use. If the infant be healthy, this quantity will not satisfy it after the first few weeks, and then double the quantity must be prepared for each feeding. Twice as many tablespoonfuls of each of the ingredients must be mixed together, making sixteen tablespoonfuls (about half a pint) in all.

"This food should not be given any stronger until the child is eight or nine months old, at least; but if the infant be a healthy one, it may take as much of it as it wants, but always of the same strength. A robust infant will often take three pints, or even more, in each twenty-four hours. It is an easy matter for any one to learn how to make the lime-water; and it is advisable to have it made at home, for a great deal is used, and if it is made at home much trouble and expense are saved.

"With regard to the propriety of increasing, from week to week, the strength of any artificial food given to infants there has been some question. Most authorities have advised that the foods should be increased in concentration until finally the infant is given pure cow's milk. The propriety of this procedure, during the earlier months of life at any rate, is very doubtful. Although there is some reason to believe that the quantity of solid ingredients in human milk increases from month to month as lactation goes on, such an opinion should be accepted only with great caution, for it seems likely that if there is any increase in the concentration of the milk after the colostrum has once disappeared and the nursing process has settled down into its even course, the increase is so slight that it may be disregarded. Analyses show that the milk of a woman whose child is two months old does not differ materially from that of one whose child is twelve or fifteen months old. If, then, nature has made no difference which our means of analysis will detect between the milk of a woman who has been nursing two months and one who has nursed twelve, an artificial food which has been found to suit an infant of two months should be made more concentrated only very gradually, and with careful observation of the effect upon the health of the infant. It is best, therefore, if the infant thrive and grow as it should, not to make any change in the food until after six to nine months of age have been attained.

"With regard to the use of condensed milk as a food for young infants, I can only repeat what I said in my former paper,—that

I cannot believe that any article which has been canned, and kept for weeks or months, or perhaps still longer, can be as good as the same thing when fresh. My table of analyses shows the composition of the dilution of condensed milk commonly used in this city, and it shows that the proportion of fat is much too small, and for this reason, partly at least, it fails as a food. Its success is due to the fact that it contains nearly the same proportions of casein and sugar as exist in human milk. Dr. Ellwood Wilson is in the habit of directing that after the first few weeks a small proportion of fresh cream be added to the condensed milk, and this would render it still more nearly what is needed. This practice, which cannot be too much commended, if condensed milk be used, is not, however, at all a common one. Withal, I am unable to believe that condensed can be as good as fresh milk, if properly used."

At a meeting held December 19, 1883, Dr. Roberts Bartholow read a paper on "Nitro-Glycerin and the Chloride of Gold and Sodium in the Treatment of Albuminuria." The former remedy (in one per cent. solution) is recommended, in drop doses, in the more acute cases, influencing as it does more directly the blood-supply; the other, a double salt, is indicated in the subacute and chronic cases, especially the latter, in doses of one-tenth of a grain at first, reduced at the end of a week to one-fifteenth of a grain, then continued for a month in smaller doses. If good effects are not observed in two weeks, they may be discontinued. He had observed very good results from its use in this class of cases.

Dr. Charles H. Burnett read a paper on "The Supposed Connection between Ear-Disease and Kidney-Disease," in which, after reviewing the testimony of different observers, he arrived at these conclusions:

1. Evidences in favor of either frequent or well-marked aural lesions dependent upon renal diseases are extremely meagre.

2. Those lesions in the ear which have been found in connection with Bright's disease and diabetes mellitus, and which may have been dependent upon the dyscrasia induced by these renal disorders, are in the form of sero-sanguinolent and hemorrhagic effusions into the drum-cavity. But the latter must not be mistaken for the sthenic form of otitis media hæmorrhagica.

3. From the serous nature of the membranous structures of the labyrinth, organic changes might reasonably be expected in Bright's disease; but positive proof of the occurrence of such lesions based on ante- and post-mortem history is wanting.

Dr. James Tyson read a "Note on Some Recently-Suggested Delicate Tests for Albumen." In this communication he con-

sidered—1, a saturated solution of picric acid, suggested by Dr. George Johnson; 2, saturated solution of ferrocyanide of potassium after free acidulation by citric acid, suggested by Dr. Pavy; 3, standard solution of potassio-mercuric iodide, suggested by Tanret,* after acidifying the urine by citric acid; 4, equal parts of a saturated solution of sodium tungstate (1 in 4), saturated solution of citric acid (10 in 6), and of water; 5, acidified solution of potassio-mercuric iodo-cyanide. The last two were suggested by Dr. George Oliver in the *Lancet*, February 3, 1883. To complete our list of available tests, he added—6, the ordinary heat and acid test; 7, the nitric acid test, by Heller's overlaying method; and, 8, the acidulated brine, suggested by Dr. Roberts, of Manchester, England, and consisting of an ounce of hydrochloric acid added to a pint of water saturated with common salt, and filtered.

The lecturer, after reporting the result of his experiments, concluded that the sodium tungstate solution and the ferrocyanide of potassium, but particularly the former, are more delicate, as tests for albumen in the urine, than heat, acid, or brine. These tests, however, like picric acid, precipitate peptones as well as albumen, and this may be a possible source of error. The ferrocyanide does not precipitate peptones, but gives a deposit with amorphous urates. If the quinine fallacy of the picric acid test be borne in mind, this solution, acidulated with citric acid, is an available test of great delicacy, cheap, and easily prepared; but the sodium tungstate was preferred, as being less liable to cause error. He would not, however, dispense entirely with the old heat and acid test.

Dr. William S. Little read a paper entitled "Eye-Symptoms and Conditions in Bright's Disease." He stated that among nine hundred and eleven cases of Bright's disease reported by different observers changes in the retina had been recorded in one hundred and eighty-five, or about twenty per cent. Amaurosis had been known as a symptom of dropsy even before the renal disease was recognized by Bright, and long before the use of the ophthalmoscope. He continued as follows:

"Retinitis, generally symmetrical, if not always so, appears in all forms of kidney-disease, while it is principally associated with the chronic disease of the cirrhotic kidney. Even though symmetrical, its presence is not always known to the patient. Especially is this so as long as the region of the macula lutea in the retina is not affected so as to produce a central scotoma. Lesions near the nerve and peripheral parts of the retina are not so pro-

ductive of recognizable scotoma in the field of vision. These cases do not have the restricted visual field and rarely the loss of color-sense that belong to optic nerve and brain troubles or contracted field of glaucoma. The symptoms may correspond to those of retinitis from any other cause,—flashes of light, color-sensations, dread of light, impaired vision, to total blindness.

"The ophthalmoscopic examination may only reveal the lesion, the patient being ignorant of it and not observing the gradual change. The picture of this form of retinitis is a decided one, as a rule. When the changes are slight, it is uniform, though at times a differential diagnosis is required from the conditions of the optic nerve and retina due to intracranial disease or to pernicious anæmia.

"While the lesions occur generally near the optic nerve and to the temporal side, the nerve itself is not implicated to the degree that might be expected from the picture it presents. The separate spots in the retina finally coalesce, approaching the disk and involving it; in other cases they surround the region of the fovea centralis and are much smaller. They may occur anywhere in the retina, varying in size; the shape is somewhat quadrilateral, but may vary as they progress; they present a white appearance. The tissue near the disk, and the disk itself, appear striated; spots of hemorrhage are found from rupture of retinal or choroidal vessels; opacities in the vitreous are seen. The state of pigmentation is the latest. In chronic cases the color of the fundus is peculiarly yellow, and the character of the picture is at times very much like the neuro-retinitis of brain-disease or pernicious anæmia.

"The changes result from the hyperæmia and infiltration of the tissue, fatty degeneration and atrophy producing changes in the blood-vessels with hemorrhage; a fatty deposit occurs in the retinal tissue, the fibres of the retina become sclerosed, and pigmentation follows.

"The optic nerve is not seriously involved, though gray degeneration may exist and numerous amyloid bodies may be seen with the microscope. The retina does not always present all the stages described; the kidney-disease being amenable to treatment, the retina may not undergo any further change; where it is chronic, a like progression ensues in the retina. Marked lesions at times disappear, leaving only a slight trace. The hemorrhagic state is more severe, the sight not only being lost, but the patient's life also being endangered.

"During gestation the same picture exists; the optic nerve may be more seriously involved. A case recently seen, and having uræmic symptoms, being unconscious two weeks prior to the delivery of the child, it being born dead, had complete atrophy of one optic nerve, with extensive retinal lesions;

* Mercuric chloride, 2.7 grains; potassium iodide, 6.4 grains; distilled water, 100 c.c.

the other nerve partially affected, and slight retinal changes; patient almost entirely blind. In another case, with convulsions, only slight changes in each eye near the fovea. In succeeding pregnancies the conditions may arise again, producing more serious changes in the retina.

"The prognosis, so far as the vision is concerned, is serious when the region of the yellow spot is encroached upon; and yet fair vision may remain after subsidence of the disease.

"Can a prognosis as to the duration of the disease or as to its fatality be derived from the eye-symptoms? Only in the chronic stages of the disease, when retinal hemorrhages are extensive and repeated, the heart being diseased. Traube considered the heart the immediate cause of these retinal hemorrhages, but they exist in cases without heart-trouble and in other diseases of the system, and in intraocular conditions. Brain-symptoms soon follow in these severe types of retinitis, in chronic kidney-disease a general hemorrhagic condition being developed, or uræmia may ensue. In the acute forms of Bright's disease no prognosis of any value can be formed from the eye-symptoms, though severe.

"As to treatment of the eye in this disease, only what renders the disease of the kidney controllable is of advantage to the retina; leeching may be useful if the patient be not too anæmic. For the vitreous opacities, in cases where the disease is under control and the acute condition of the eye abated, electricity is of considerable value, much more so than any plan of medication.

"The microscope shows a sclerosis of the retinal fibres, the walls of the blood-vessels degenerated, fatty deposits along the fibres and in the layers of the retina, also in places a pigmentation; the choroidal vessels are implicated as well.

"Uræmic amaurosis is rare, Wagner finding one case in one hundred and fifty-three of Bright's disease. Graefe found two cases in thirty-two cases of albuminuric retinitis; it presents no retinal change that is recognizable.

"As yet we cannot tell why the retinal changes occur with disease of the kidney. Does the structure of the retina and its proximity to a highly-vascular tissue account for it?"

In the discussion on Dr. Little's paper, Dr. Albert G. Heyl said, "I desire to direct attention to the relation which exists between the intraocular phenomena observed in Bright's disease and the anatomical arrangement of the intraocular arteries. The latter are divisible into certain areas: thus, we have one area composed of the arterial circle of Zinn which supplies the optic papilla; another formed by the arteria centralis retinæ which supplies the retina; another composed of short posterior ciliary arteries which supply the pos-

terior half of the choroid; still another composed of the long ciliary arteries which supply the iris and the anterior half of the choroid; the short anterior ciliary arteries also take part in the formation of this area. Now, it is established that abnormal changes in connection with Bright's disease may exist primarily in each of these areas, with perhaps one exception, to be mentioned directly. Thus, the papillary area may be affected, and a papillitis will be found on examination, the choroid and retina and iris being unaffected. Again, the posterior choroid area may be affected, and there will be found the phenomenon of subretinal œdema, and also in the choroid the white accumulations so well known in connection with Bright's disease. Both of these forms are considered to be rare; perhaps they would be observed oftener were we more alert. A case reported by me (*Amer. Jour. Med. Sci.*, October, 1874) of retinal separation occurring in one eye, while simultaneously the other was affected by temporary amblyopia, probably belonged among the affections of the posterior choroidal area. Further, the retinal area may be affected, and the peculiar retinal appearances so well known are found. So far as I am aware, no separate affection of the irido-choroidal area has been described; there seems to be no reason why it should not occur. Of course there are many cases in which the areal lesions exist together, but they are to be looked upon as the result of one common cause, not as the result of a morbid process starting in one area and gradually implicating the others.

"In referring to the snow-like patches of the fundus, commonly looked upon as the characteristic intraocular appearance of Bright's disease, I think that to a certain extent they are to be looked upon as the remnants of intraocular hemorrhage. While hemorrhagic clots formed of normal blood are absorbed without any whitish residuum being left, the case is different where the blood, as it circulates in the vessels, is in a morbid state. Thus, in a case of pernicious anæmia I have observed a number of round red hemorrhagic spots with white centres. On examination, ten days later, the red coloring-matter of the hemorrhages had largely disappeared, leaving as a residuum white masses. Some of these were speckled with red points arranged in spindle-form like the hemorrhages of the retinal nerve-fibre layer. They were, however, simply the unabsorbed remnants of the round hemorrhagic spots seen ten days before. So in morbus Brightii the blood is in such a morbid condition that hemorrhagic clots rapidly lose their red coloring by absorption, leaving behind a white residuum, which may partially, at least, explain the white placques seen with the ophthalmoscope."

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, DECEMBER 27, 1883.

The President, DR. TYSON, in the chair.

Fracture of the base of the skull. Exhibited by Dr. GUY HINSDALE.

J. H. W., æt. 50, fell on the ice December 8, 1882, striking upon the stone pavement. The blow was received on the posterior and left side of the skull, and the skin was not broken. He was shortly afterwards admitted to the Episcopal Hospital, and was totally unconscious. Blood was found flowing from his mouth and left ear, and his nose contained clots. His pupils afforded no evidence of his condition, because of an iridectomy which had been performed on both eyes some years previous. He talked incoherently. Breathing was labored and at times stertorous. Paralysis of the left leg was noted.

The blood continued to issue from the left ear, and on the second day the discharge became thin, and continued serous until his death, which occurred on the eleventh day. The urine was examined several times, and found to contain sugar in moderate amounts, but no albumen. Urine was passed freely. The patient never regained consciousness. He became more stupid, and paralysis of the left leg remained.

At the autopsy, a superficial clot was found over the brain, beneath the seat of injury. A very large clot was found over the right frontal region, beneath the membranes, and filling the sulci between the convolutions. This was the result of the counter-stroke, the force having been first received at a point diametrically opposite, and fully accounts for the left-sided paralysis. The fracture was slightly over five inches in length. It extended from a point in the left occipito-parietal suture one and a half inches behind the temporal bone, and traversed the suture, passing through the petrous portion of the temporal, the auditory canal, close to the inner side of the foramen ovale towards the foramen rotundum, where it terminated.

Necrosis of the temporal bone, and brain-abscess. By Dr. GUY HINSDALE.

This specimen was removed from the body of Margaret P., æt. 46, who died in the Episcopal Hospital September 21, 1882, after long-standing aural disease.

In early childhood she had scarlet fever; this was followed by aural catarrh, and the discharge from the ear continued until her death. She stated that when 22 years of age a polypus could be seen in her ear. Fifteen years ago this was removed. Again masses were removed thirteen years, two years, and one year ago. In May, 1883, four months before her death, the patient consulted Dr. Burnett, who has very kindly furnished me with

notes of that date. The patient presented at that time a most wretched appearance. Extreme weakness, pallor, and emaciation betrayed the intense suffering of this unfortunate woman. Paralysis of the right side of the face had occurred during the previous winter without the supervention of additional ear-symptoms. At the time of examination she presented great sensitiveness of the auriculo-temporal nerve, and complained of intense pain over the right temporal bone. To control this pain she was accustomed to use morphia suppositories. An examination of the ear revealed a mass of granulations filling the entire lumen of the auditory canal, half an inch from the entrance. Late in May a large polypoid mass was extracted. Bare bone was then discovered on the posterior portion of the canal, the channel narrowed and blocked with granulations. About two fluidounces of blood escaped after removing this mass.

When I saw the woman at the hospital in September, she was in a very low state and evidently near her end. Her mind was seriously affected. Conversation was impossible, and she groaned with the pain which large doses of morphia could not altogether control. There was a moderate but constant purulent discharge from the ear and from a sinus which was found above the meatus. The whole temporal region was boggy. The probe passed in freely over an inch, and loose particles of dead bone could be everywhere felt. The disease had long been beyond the reach of any remedy, and there was nothing to be done but to relieve pain and await her death.

The specimen removed embraces portions of the right temporal, parietal, and occipital bones. Almost all the temporal bone has been destroyed. Only the mastoid process and the upper border of the squamous portion remain. An area of bone one and a half inches by two inches has entirely disappeared. Adjacent to this region and lying next to the middle fossa of the skull was a brain-abscess, the walls of which were greatly thickened. On opening this cavity, about an ounce of thick, yellowish pus was found. A probe easily reached this cavity through the auditory canal and the sinus above it, and many loose fragments of bone were found at the outlet. The styloid process was found loose, but held in position by the various ligaments that arose from it. The inflammatory process, in which the meninges had of course shared, was not acute. The brain-substance beyond the abscess-walls had no unusual appearances, and the left cerebral lobe, with its membranes, was normal.

Dr. C. H. BURNETT said the great destruction of bone-tissue is remarkable and unusual in extent, being three inches in length and one and a half to two inches in breadth. The necrosis seemed to have originated in

the tympanic region rather than in the mastoid, and hence belongs to the class of cases second in frequency,—the most frequent being those fatal cases where the bone-disease originates in and extends from the mastoid cavity. The case when seen by Dr. Burnett, in the spring of 1883, presented very grave symptoms, and the patient was extremely weak,—so much so that Dr. Burnett was surprised that she lived until September. The occurrence of extensive granulations in the external auditory canal constituted a very unfavorable feature, as they acted like a dam, preventing the escape of the products of inflammation, and held them back in the tympanic cavity and mastoid cells, forcing them to break an escape through more important and vital tissues. The case furnishes another example of the evil of neglect of purulent disease of the ear.

Dr. BURNETT inquired whether there were symptoms of destruction or implication of any of the nerves passing through the cavernous sinus, as would be shown by alteration in parts supplied by the oculo-motor, pathetic, and ophthalmic nerves, to which Dr. Hinsdale replied that no eye-symptoms had been ever detected.

Case of phthisis with empyema. Presented by Dr. H. M. FISHER.

The patient, J. C., æt. 21, was admitted to the Episcopal Hospital March 17, 1883. He states that he has had a slight cough for one year, but that he was not much annoyed with it until about one month ago, when he was seized with severe pain in the left chest, accompanied by chilly sensations and difficulty of breathing. Upon admission, he presented all the symptoms of left pleural effusion, absent vocal fremitus, tubular breathing, and bronchophony in the neighborhood of the spinal column on the left side. His chest was tapped on the morning of March 21, and three pints of a semi-purulent fluid were evacuated. The operation was followed by great improvement in the patient's symptoms. Three weeks later he left the hospital, contrary to advice. He was readmitted April 20, and stated that soon after leaving the hospital the pains in the side returned, followed by dyspnoea. April 23, paracentesis thoracis was performed by Dr. Henry, and fifty-six ounces of purulent fluid were drawn off, and the operation again afforded great relief. A violent fit of coughing followed the withdrawal of the canula. The heart's apex-beat was found, before the operation, to be immediately below the right nipple; after the operation it was found to have shifted one inch to the left of its previous position. May 5, Dr. Forbes operated at Dr. Henry's request, making two openings into the left pleural cavity, one at the fifth interspace, the other at the fourth and to the right of the first. Ten ounces of purulent fluid were withdrawn

by means of the aspirator, and a soft-rubber catheter was passed in at one of the openings and out at the other. The pleural sac was then ordered to be washed out daily with a solution of corrosive sublimate, gr. i-3i.

During the summer the patient's general condition seemed for a time to improve; his appetite, however, continued obstinately bad, and he had constipation alternating with diarrhoea. In October it was noted that he was losing flesh and strength rapidly, and that there was much oedema of the feet and legs. During this month diarrhoea became a constant symptom, and death occurred November 22.

Post-mortem examination, ten hours after death.—The body is extremely emaciated. The left lung is contracted to about one-fourth of its normal size, and contains in its upper lobe some cheesy masses, with areas of catarrhal pneumonic infiltration. The left pleural cavity contains about five ounces of ichorous pus. The parietal layer of the left pleura is so tightly adherent to the chest-wall that it is impossible to detach it without dissection. The pulmonary layer is also tightly adherent to the contracted left lung, the lobes of which are firmly matted together by adhesions. The right lung also presents numerous cheesy foci, with large areas of catarrhal pneumonic infiltration. The heart is rather small, and its tissue is pale, but its valves appear normal. The liver weighs six pounds six and one-half ounces; its tissue is pale, and it has a *markedly waxy appearance*. The spleen is much enlarged, its tissue *firm, and of a dusky-red hue*. Numerous *yellowish-white nodules* are also seen in it, the largest of which is perhaps of the size of a small pin's head. The kidneys are rather large, their capsule is non-adherent, and their tissue rather paler than normal. Numerous *minute whitish nodules* are also found to be scattered through the tissue of both kidneys. These appear rather more numerous and larger in the cortical portions, but are also found in the medullary portions. From some of the larger nodules a whitish puriform substance can be squeezed out with the blade of the knife. With the naked eye the exact nature of the above-mentioned infiltrations of the spleen and kidneys is difficult to determine. Nothing abnormal was noticed in the intestinal tract, except in the ileum, where an area of intense congestion was noticed about one yard from the ileo-cæcal valve, but no ulceration was anywhere detected.

My view of the sequence of pathological events in this case is the following: *first*, catarrhal pneumonia, with the production of cheesy foci; *secondly*, scrofulous inflammation of the pleura, with attendant exudation, which from the start was probably more or less purulent; and, *thirdly*, the infiltration of the *liver, spleen*, and possibly also the *kidneys*, with amyloid matter.

The exact nature of the yellowish-white nodules in the spleen and kidneys being yet undetermined, I cannot yet assign to them a positive place in the chain of scrofulous processes; but from the absence of any macroscopic evidence of embolic infarction or of any appearance of infarction in the one microscopic section of the kidney I had the opportunity of examining (kindly made for me by Dr. Henry), I should conclude that these were also cheesy foci, and their production may perhaps have nearly coincided in point of time with the production of the cheesy foci in the lungs above alluded to.

Dr. SHAKESPEARE said that the specimen was a good instance of miliary tuberculosis. The small collection in the spleen might be tuberculous, he thought, and should have been examined for tubercle-bacilli. He adverted to the successful employment of very weak solutions of corrosive sublimate in washing out suppurating serous cavities.

Atheroma, dilatation, and aneurism of the aorta; atheroma of some of its branches; death from rupture of the aneurism into the left pleural cavity; congenital deformity of the stomach; malposition of the transverse colon and right kidney; irregular shape of the kidney; anomalous origin of the renal arteries and of the ureters. By J. H. MUSSER, M.D.

These remarkable series of specimens illustrate how serious a disease can be in progress within the body without any manifestations. The patient had been under the care of Dr. Ludlow in the Presbyterian Hospital, complaining of, and being treated for, nasal catarrh. He complained also of a slight bronchitis, but, it not being very decided, the nasal trouble alone was treated. A white man, æt. 63, well nourished, of temperate habits, and by occupation a wheelwright; was under observation ten weeks; no previous illness. He slept well the night before his death until 5 A.M. He then told the night-nurse he was very cold. Being covered, he went to sleep apparently; an hour afterwards he was found dead. The writer made the autopsy about twelve hours after death.

Inspection.—Rigor mortis well marked; body well nourished; no scars or bruises; no ecchymoses; abdomen moderately distended; in the right lower quarter a decided swelling was noticed, almost filling that area, and resonant on percussion.

Section.—Abdominal cavity first examined. The above-described swelling was due to the cæcum and transverse colon. The ascending colon extended about half-way the usual distance, and then turned at a sharp acute angle into the transverse colon. The latter descended parallel to the former into the right iliac fossa, and from thence diagonally upwards across the abdomen to the usual place of junction with the descending colon. The

omentum contained a considerable amount of fat. The right lobe of the liver could not be seen until removal of the ribs, when it was found two inches above their margin, and to be only two and one-half inches in length in the nipple-line. In the median line this same perpendicular length was three and one-half inches. More of the left lobe was visible than of the right. Along the edge of the left lobe, from the median line, four and one-half inches in length, extended the *stomach*. It appeared to be small in size. When removed, it was found to be divided by a constriction five inches from the fundus; from this constriction to the pylorus the length was four and one-half inches. The first or cardiac end was much smaller than normal, the walls and mucous membrane healthy. The second portion was a mere tube with thick walls. The thickening was due to the hypertrophy of the longitudinal muscular layers, and to the folds that the mucous membrane was thrown into. These folds were very marked, longitudinal, and on their crests congested. The peritoneum was opaque and thickened. The *liver* was smaller than usual also. The capsule was thickened and opaque along the edges of the right lobe; on the superior surface there were cicatrices, and a firm adhesion at one point to the diaphragm. On section, the tissue was firm on pressure and congested. Commencing cirrhosis noted in microscopical examination. The *gall-bladder* projected one inch below the liver-margin in the nipple-line. The *left kidney* was found in its normal position. It was much enlarged, five inches long, two thick. Its pelvis was filled with fat, the substance pale, hard on pressure, with a contracted cortical portion. The capsule tore off easily. The *right kidney* was found in the pelvis at the right sacro-iliac articulation. It was small in size, irregular in shape, parallel to the os sacrum. The portion dipping downwards tapered to a point, being one-half inch in width; the upper portion was two inches wide. The pelvis of the kidney was filled with fat. Towards the small end of the kidney the pelvis divided, one part extending upwards one inch, along one side of the organ, the other the same length on the other side; or it might be said that a portion of the kidney dipped into the pelvis, separating it for an inch. The renal artery arose from the normal origin of the middle sacral. Therewith from the point of origin it divided; one branch, two and one-half inches long, entered one lateral hilus, if it may be so termed. The other divided two and one-half inches from the main trunk, one subdivision entering the remaining lateral hilus, the other running across the floor of the pelvis to the normal end of the kidney. The ureter arose by three branches,—two from the upper end, one from one of the smaller pelvis.

Thoracic cavity.—Left pleural cavity almost

filled with blood, the lung floating on the fluid. The lateral surface was adherent to what was the aneurism. On its removal, the collapsed sac was seen on the left side of the vertebral column. The heart and aorta were removed entire. *Heart* enlarged, left side especially, weight eleven and one-half ounces; measurements of left ventricle,—near base one and one-eighth inches thick, in the middle seven-eighths inch thick, at apex one-half inch thick; mitral valves a little thickened, aortic healthy; atheromatous processes were present in the aorta from its beginning to the celiac axis, and extended into the latter vessel, and also the innominate and carotid arteries. These processes included the sclerotic changes shown by innumerable small, smooth, firm elevations of the surface, the degenerative changes, fatty and calcareous, and also the atheromatous. One calcareous plate was found in the celiac axis. From its origin to the middle of the transverse aorta the vessel was dilated, and the characteristic fatty changes of the proliferated cells of the intima—lemon-yellow-colored, smooth, soft elevations—were marked. Opposite the trachea the calibre of the aorta diminished to almost normal size, and here the sclerotic changes were most marked, as well as around the mouths of the vessels. At the junction of the transverse and descending aorta the lumen was again closed; here the aneurism originated. It was five and one-half inches long, and, when distended, twelve inches in circumference. It was of the true variety; but from it sprang four false aneurisms, varying in size from a filbert to a small egg. Organized clots covered the surface of portions of the wall, and on dissection it was found that these clots were either connected within the false aneurisms or clinging to atheromatous ulcers. Rupture of the sac took place behind the pleural adhesions and leaked into the cavity, finding its way through the adhesions. The vertebræ were not eroded, and, although the sac was in contact with the left bronchus, there were no evidences of decided pressure upon it, while the relations to nerves, other vessels, and the œsophagus were such that the usual pressure-symptoms could not arise. It is thus seen that by physical examination alone could this aneurism have been detected. There were absolutely no subjective symptoms, and the autopsy reveals the reason of this.

Hour-glass contraction of stomach (congenital). Presented by J. H. MUSSER, M.D.

The patient, an adult, from whom I removed this stomach died of organic heart-disease. Constant vomiting occurred a few months before death, but as a sequence of the general condition of the patient, and not on account of the gastric change. I call the appearance congenital because of the absence in the clinical history of any occurrence throughout life to have caused it, and of the

want of evidence on post-mortem inspection. The contraction took place in the centre, and was transverse; the peritoneum and submucous connective tissue were thickened at this point. Anterior to the constriction the muscular coat was hypertrophied. The mucous membrane was thrown into folds in the constriction.

Lung from a case of pleuro-pneumonia complicated with delirium tremens. By J. H. MUSSER, M.D.

I present this specimen to-night on account of its perfection. It is the lower lobe of the right lung in the stage of red hepatization, as indicated by the appearance, weight, etc. Almost the entire pleural surface, including the diaphragmatic, is covered with recent lymph, the layer averaging one-half inch in thickness. The tongue of the lung dipping into the space between the diaphragm and the thoracic wall is not solidified entirely. Here the lymph is abundant and the contiguous portion of the lung is hepatized, as if the inflammatory process extended from the pleura. This peripheral hepatized portion is but one-fourth of an inch wide. The inner succeeding portion is not solidified.

The patient died eighteen hours after admission to the hospital, from heart-clot. When admitted, there were evidences of its formation, and in addition he had delirium tremens. The pneumonia was distinctly recognized. There were no signs of simple or diaphragmatic pleurisy. At the autopsy, on removing the sternum, the extreme distention of the right heart, especially the auricle, was remarked. On opening the heart, hypertrophied from other causes, the right side was found filled with blood, and an enormous ante-mortem clot entwined around the leaflets of the tricuspid valve and extending through the auricle into the pulmonary vessels. A similar clot was found in the left heart. The kidneys were congested, and commencing cirrhosis appeared manifest.

The history of the case antecedent to the admission to the hospital is as follows. The patient had been on a "spree" for two weeks and five days before admission, and had had a severe chill, followed by the symptoms of pneumonia. Two days after the chill the mania developed, and on the day of admission he had been found wandering about the streets by a crony, who brought him to the hospital. He was 41 years old, a boss machinist, single, of intemperate habits.

Carcinoma of the uterus, fatty kidneys, and emphysema. By W. A. EDWARDS, M.D.

The specimens which I show you to-night were taken from the body of A. E. this morning. I have not as yet had the opportunity of examining them microscopically. The patient was visited but once before her death by Dr. J. S. Watt, for whom I made the post-mortem examination. The history of the

patient is, of course, imperfect; in fact, little, if any, could be obtained. The symptom of which she complained the most was an ill-smelling, irritating discharge from the vulva: so our attention was first directed to the womb, which presents a scirrhus carcinoma of the external and internal os and of the cervical canal. The mucous membrane of the organ is softened and very rugous, looking not unlike a mammillated stomach. A microscopic section will probably show cellular infiltration. The uterus is enlarged. Our subject was a multipara, æt. 45, nine children and two miscarriages. A cyst was seen in the right parovarium; its contents were pure serum. The ovaries presented areas of calcareous degeneration; other pelvic viscera normal. The kidneys are small, and appear to have undergone some amyloid change; the right one was a rib higher than its normal position. Heart-muscle has undergone some fatty degeneration, as has also the aorta; valves almost normal; ante-mortem clots in each ventricle, that in the right of unusual size. Pericardium contained the usual straw-colored effusion.

Lungs.—Left, normal; right, the pulmonary and costal pleura were in many places adherent by thick, well-organized lymph, which beautifully illustrates the *rationale* of friction-râles, their sudden appearance, short duration, and equally sudden disappearance. About a pint of purulent effusion was collected in the base of right chest. The diaphragmatic pleura was tightly adherent to the pulmonary, requiring some tearing in order to separate it. The lobes of this lung are bound down by recent lymph. Scattered throughout the mesentery were to be seen areas of calcareous degeneration about the size of almonds.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, JANUARY 3, 1884.

The President, R. A. CLEEMANN, M.D., in the chair.

BATTEY'S OPERATION.

DR. E. E. MONTGOMERY corrected a statement made in the report of the case of ovariectomy narrated by him at the meeting of December 6, 1883. *Silk ligatures*—not catgut—were used to tie the pedicles.

The convalescence of the patient had been very satisfactory. The temperature did not rise above 99° F. In performing this operation no antiseptic was used. All instruments, sponges, etc., were washed in boiling water, and boiled water was used in washing the wound and abdominal cavity. The mental condition of the patient was such that she

was kept constantly under mechanical restraint; and on one occasion, when she had been left alone for a few minutes, she tore all the dressings off the wound, and at the next visit it was found bare; but no bad result followed. The sutures were removed on the eighth day. Some pain in the lower part of the abdomen, and slight fever, commenced on the twenty-fifth day; but she has since again improved. Her mental condition is at the present better than it had been for a year before the operation, and she can now converse rationally.

SEPTICÆMIA AFTER ABORTION.

Dr. W. H. PARISH reported the following case. A young woman, 20 years of age, came into the Philadelphia Hospital in the finishing stages of an abortion which had been coming on for some days. The cause was unknown, but was probably instrumental. At the time he first saw her, three days after her admission, her temperature was 103° to 104° F., and her pulse one hundred and fifty. She had had a chill before admission. Her abdomen was distended and tender, and the uterus was very sensitive. The right parotid gland was swelled and painful. It continued to enlarge, and, fearing septicæmia, he gave her fifty grains of quinine daily, by rectum, as the stomach was too irritable to retain it. One ounce of whiskey was given by the mouth every hour, day and night. A small quantity of morphia was given to relieve the abdominal tenderness. The pulse and temperature fell rapidly, but the gland continued to be swelled and painful. It was quite hard, but was not discolored. There were no chills now, but, fearing the presence of pus, he made an opening by Hilton's method, incising the skin and using a director to tear an opening through the gland-tissue. This opening was enlarged by passing a pair of forceps, closed, along the groove of the director, and withdrawing them opened. This opening gave exit to two or three fluidrachms of pus. The gland now improved in appearance, but another abscess opened behind the gland and discharged freely. The two abscesses did not communicate. The patient is now convalescent.

OFFICERS OF THE SOCIETY FOR 1884.

President.—Richard A. Cleemann, M.D.

Vice-Presidents.—B. F. Baer, M.D., W. T. Taylor, M.D.

Secretary.—W. H. H. Githens, M.D.

Treasurer.—Alfred Whelen, M.D.

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Publication Committee.—John H. Packard, M.D., James V. Ingham, M.D., Elliott Richardson, M.D., B. F. Baer, M.D.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held January 9, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

TUBERCULOSIS OF THE TESTICLE.

Dr. A. G. GERSTER presented three different specimens, illustrating different stages of acute tuberculosis of the testes, which he had extirpated within a comparatively recent period. In the case of the first specimen presented, the patient had had hydrocele, for which Volkmann's operation was performed, resulting in the successful closure of the sac and the cure of the hydrocele. But five weeks later the patient returned, with symptoms of chill, sweats, loss of strength and flesh. Tuberculosis testis being recognized, ablation was performed, and the patient recovered from the aforementioned symptoms. Upon examination of the part removed, it was noticed that the central mass was hard but had not yet undergone the breaking-down process.

In the second case, the man had suffered from acute orchitis and epididymitis of traumatic origin. About seven weeks after the injury there were signs of tuberculosis of the testicle, with chills, sweats, loss of strength, etc. The hardened mass in this case had begun to break down centrally; and the tunica vaginalis, instead of being smooth and hard, was fungous, resembling the condition of the synovial membrane in tuberculosis of the joints.

In the third specimen the disease had become more advanced, the specimen being almost entirely broken down. The tunica vaginalis was almost obliterated. Dr. Gerster thought that tuberculosis of these organs was recognized earlier at the present time than formerly, and very properly led to the practice of early ablation. Formerly the idea prevailed that the organ should be let alone until finally it went on to a condition of so-called hernia testis. In none of these cases were signs of associated pulmonary tuberculosis discovered.

SPECIMEN OF LUNGS, LIVER, AND KIDNEYS
THE SEAT OF TUBERCULOSIS.

Dr. J. FURGESON presented the specimens, with the history of the case. The points of interest were—first, the absence of cavities in the lungs, which were the seat of very general tuberculosis; and, second, the excellence of the specimens of recent miliary tubercle pertaining to the liver and kidney.

Dr. E. C. WENDT remarked that some German observers had seen the tubercle-bacillus in the urine of patients suffering from tuberculosis of the kidneys.

PULMONARY AND NEPHRITIC TUBERCULOSIS,
WITH OBSCURE SYMPTOMS.

Dr. H. N. HEINEMAN presented the speci-

mens, which had been removed from a German, 29 years of age, who gave the following history. He entered the Mt. Sinai Hospital on the 23d of December last. There was no history of venery or of alcoholism in excess. His symptoms dated back four years, when he had pain in the region of the bladder, frequent urination, occasional vesical tenesmus. The urine was cloudy, but never contained blood. At times there was incontinence, while at other times the urine had to be withdrawn with the catheter. He also suffered some from backache, and had involuntary emissions at times, unaccompanied by erection. For four years previous to his marriage, which took place two years ago, he was addicted to masturbation. Nine months before admission, irregular chilly sensations developed. On admission, there was no cough, no pyrexia; there was emaciation, and râles heard over the chest, the signs pointing only to simple bronchitis. The urine was diminished in quantity and contained pus. The patient died six days after admission. The autopsy revealed recent miliary tuberculosis of the lungs, bronchitis, cirrhosis of the liver, and waxy spleen. The left kidney was eight inches long, four and a quarter inches wide, and weighed two pounds. The pelvis contained no pyogenic membrane. The cavities into which the kidney was divided were filled with pus and cheesy material. The ureter was greatly dilated. In the other kidney, the structure proper to the organ had almost completely disappeared under the influence of hydronephrosis. The bladder-walls were thickened and coated with pus. The prostate was broken down. Urethral stricture did not exist.

Dr. HEINEMAN said that the case was interesting inasmuch as there had been acute and chronic tuberculosis without fever. He, however, regarded this circumstance as of less frequent occurrence than did some physicians. The genito-urinary symptoms were of old date in this case, while the condition in the lung seemed to be of comparatively recent origin. It was probable, he thought, that the hydronephrosis in one kidney antedated tuberculosis; that, in consequence, the other kidney, having to do double work, became hypertrophied; and that upon this process there afterwards developed tuberculosis.

Dr. HEINEMAN also presented specimens from a child which had suffered from diphtheria, and, before the symptoms of this disease had entirely disappeared, pneumonia supervened, and afterwards empyema developed. The patient improved after the pus found exit from the pleural cavity, but the general condition was so low that death took place. At the autopsy, acute pulmonary tuberculosis was present, and pericarditis.

Dr. V. P. GIBNEY referred to a somewhat similar case, and spoke of the difficulty of recognizing the pericarditis.

Dr. HEINEMAN also presented a heart which weighed thirty-seven ounces and was the seat of hypertrophy and dilatation and of acute ulcerative endocarditis, but there had been no chill nor febrile movement. The case was specially interesting from the negative history.

Dr. BEVERLY ROBINSON presented a heart with a diaphanic interventricular septum. He also presented some specimens removed from a patient who during life had no cough nor expectoration, nor stethoscopic signs of pulmonary consolidation, although at the autopsy there existed well-marked hepatization. On the other hand, the heart was normal, whereas during life there had been a distinct murmur pointing to aortic stenosis. The kidneys were the seat of chronic interstitial nephritis; and the question arose whether this form of Bright's disease could have been due to the existence of a slight urethral stricture. There was no cystitis.

Dr. PEABODY and Dr. FURGESON replied that they believed the cystitis was, as in many other cases, independent of the urethral stricture.

LESIONS OF PERNICIOUS INTERMITTENT FEVER.

Dr. G. L. PEABODY presented the brain, liver, and spleen of a man who had recently died of pernicious intermittent fever, probably contracted in the West Indies, from whence he had arrived on the 1st of January. There was no elevation of the temperature until just before death. He entered in a state of apathy; coma developed, in which condition he died. The organs presented were deeply stained with blood-pigment. In the brain this was confined to the lumen of the blood-vessels. The same was probably true of the liver and spleen, although less easily demonstrable.

REVIEWS AND BOOK NOTICES.

RECHERCHES CLINIQUES ET THÉRAPEUTIQUES SUR L'ÉPILEPSIE, L'HYSTÉRIE ET L'IDIOTIE. Par BOURNEVILLE, Médecin de Bicêtre, et BONNAIRE et WUILLAMIE, Internes. Paris, 1882.

This book of nearly two hundred pages is composed of an annual report of the medical service for epileptics and idiots in the Bicêtre for 1881, and of observations made in this hospital upon various cases. The extent of the field for observation may be judged of from the fact that at the beginning of the year there were one hundred and fifty-two adults and one hundred and twenty-six infants in the wards. A curious and not very creditable incident of the year was the syphilitic infection of a number of the male children by a nurse of pederastic tastes and practices.

The notes on idiocy occupy some fifty pages,

filled with most elaborate clinical and post-mortem notes of cases arranged pathologically under headings of sclerotic hypertrophy of the convolutions, meningo-encephalitis, and microcephalic development; and some of the cases are very well illustrated by lithographic plates.

A long account, with numerous thermometric reports, is given of an epidemic of measles which occurred in the hospital during the year. Among what may be called miscellaneous cases we notice a very interesting account of a well-pronounced typical hystero-epilepsy occurring in a boy and cured by the conjoint use of repeated cold douches, given, twice a day, for from thirty to forty seconds by means of a rain and jets (lateral?), gymnastic exercises, and the monobromate of camphor. Several cases are detailed in which the bones or joints were affected in persons suffering from nervous disease, and the fact that the victim of locomotor ataxia may simultaneously suffer from rheumatism is clinically established, whilst the differences between such arthropathies and those of trophic origin are clearly pointed out. A case of osteomalacia with epileptic convulsions in a woman whose autopsy showed no cerebral disease is of interest, as bearing upon the question of the existence of the neurotic temperament without definite nerve-lesion. Intestinal lesions and bone-disease existed, and there was a family history of severe nervous diseases in the immediate families of both father and mother, whilst nine sisters or brothers had had convulsions. With such an inheritance of weak, uncertain nerve-centres, peripheral lesions or general malnutrition seems sufficient to awaken an epilepsy.

Enough has been said in regard to the brochure before us to show its character and scope; it is a valuable record of well-observed, carefully-detailed cases, a storehouse of laboriously observed disconnected facts,—the bricks, so to speak, out of which is built the great temple of medical knowledge; not a systematic popular treatise, but a book for the few who think and systematize upon observations made by others as well as by themselves.

H. C. W.

PHYSICIANS' VISITING LISTS.

"The Medical Record Visiting List, or Physician's Diary for 1884," published by William Wood & Co., New York, contains, in addition to the usual tables, metric system, etc., articles upon the proper doses of drugs for hypodermic use, by the mouth, and inhalation; on disinfectants, the urine, poisons, emergencies, on asphyxia, and other topics required for immediate reference. The dates are consecutive, a week to a page, the paper is good, the book being gilt-edged and bound in soft Russia, fastening with a rubber band if desired.

"The Physician's Visiting List for 1884," by Lindsay & Blakiston, is now in the thirty-

third year of its publication, and will need no extended comment. It contains the usual introductory matter, including a Posological Table and Silvester's Method for Artificial Respiration. It is dated like the preceding, strongly bound, fastening with a flap, and is a useful book.

"The Physician's Daily Pocket-Record, comprising a Visiting List, many Useful Memoranda, Tables, etc.," by J. W. Butler, M.D. A new and thoroughly revised stereotype edition, with Metric Posological Table, etc. Edited by D. G. Brinton, M.D. This book fastens with a clasp, and is strongly bound: it is now in the eighteenth year of continuous publication. The introductory matter is more extended than in either of the foregoing. The Posological Table, the article on Treatment of Emergencies, and the Table of the Urine, are especially noticeable. The arrangement of the visiting list, also, is different. While each double page is devoted to one week, the figures are not introduced, so that it may be used for any week or any year. The pages are numbered, so that an index may be made at the end for easy reference in making out accounts. It also contains a good Obstetric Record, and one of deaths and vaccinations, besides the usual memoranda and cash accounts.

GLEANINGS FROM EXCHANGES.

MYXŒDEMA.—At the meeting of the Clinical Society of London, on November 23, an interesting debate took place upon the subject of myxœdema, in which Sir W. Gull, Dr. Ord, and other observers whose names have been associated with our knowledge of the disease, took part. A valuable communication was made by Dr. Felix Semon of a series of cases of myxœdema occurring after extirpation of the thyroid gland, by Prof. Kocher, of Berlin, who, not being acquainted with the disease as such, had described his cases as a peculiar form of cachexia: in sixteen instances of complete removal the myxœdematous changes had been observed, whilst in the cases of partial removal the results upon the general health had been satisfactory. The previous belief in the intimate connection existing between the loss of the thyroid gland and the development of myxœdema was undoubtedly strengthened by the evidence which the discussion called forth, but it was no less evident that there are at present no facts extant by which the nature of that connection can be determined.—*Medical Times and Gazette.*

A CASE OF IDIOPATHIC GANGRENE OF THE UTERUS.—A paper, by Mr. Lawson Tait, was read before the Obstetrical Society of London (November 7), containing an account of a remarkable case. The patient, aged 34, was

admitted into hospital on account of vague pelvic pain and offensive watery discharge. The uterus felt soft and flabby, the abdomen was swollen, and there were feverish symptoms. The patient died forty days afterwards, and on post-mortem the uterus was found a black, sloughing, stinking mass, having only about a square inch of normal tissue. No reason could be discovered for the gangrene. No operative treatment was permitted, or else it would probably have been quite easy to remove the dead uterus by abdominal section.—*Medical Times and Gazette.*

CIMICIFUGA IN EPILEPTIFORM NIGHTMARE.—Dr. Ed. M. Small, of Eastport, Maine, sends us the report of a case occurring in his practice almost identical with one published recently in these columns in the report of Prof. H. C. Wood's clinic. The disease was epileptiform nightmare, and it was cured in Dr. Small's case by half a teaspoonful of powdered *cimicifuga racemosa* being administered at bedtime. The paroxysms at once ceased, and there had been no return in a lengthy period of observation. The patient also was ordered to partake of only a light supper each night.

MISCELLANY.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—The annual meeting of this Society will be held at Philadelphia on May 14, 15, and 16, 1884, in the assembly room of the Union League, Broad and Walnut Streets. The President's reception and the entertainment by the Philadelphia County Medical Society will be held on the evening of May 14, at the Pennsylvania Academy of the Fine Arts, Broad and Arch Streets.

The by-laws require the programme of the meeting to be printed and distributed at least one month before the date of the meeting, and no voluntary paper is allowed to occupy more than twenty minutes in its reading.

Notice is hereby given that all those who wish to present papers should send the full title and a short abstract of the same to the Committee on Arrangements on or before March 1, 1884, in order that a varied and attractive programme may be prepared.

No paper will be selected for a position upon the programme of the meeting unless an abstract has previously been seen by the Committee.

JOHN B. ROBERTS, *Chairman*,
1118 Arch Street, Philadelphia.

By order of the Committee.

THE second annual meeting of the National Association for the Protection of the Insane and the Prevention of Insanity was held in this city on January 22, when the

following officers were elected for the ensuing year:

President.—Dr. Joseph Parrish, of Burlington, N.J.

Secretary and Treasurer.—Dr. Charles L. Dana, of New York.

Executive Committee.—Dr. Parrish, Dr. Dana, Dr. Edward C. Seguin, of New York; Dr. J. C. Shaw, of Brooklyn; Dr. Alice Bennett, of Norristown; Dr. W. B. Atkinson, and General John F. Hartranft, of Philadelphia.

The annual report of the Executive Committee on Finance and of the editors of the *Quarterly Journal* was read, after which the members were entertained at luncheon by Dr. Atkinson.

A NEW SOCIETY FOR THE CULTIVATION OF MEDICAL JURISPRUDENCE.—A meeting of a number of invited gentlemen, representing both the legal and medical professions, was held at the hall of the College of Physicians, Friday evening, January 18, 1884, for the purpose of forming a permanent organization for the study of forensic medicine. Prof. S. D. Gross was called to the chair, and announced the object of the meeting. Prof. Henry Leffmann was appointed Secretary. Among those present were W. S. W. Ruschenberger, M.D., John H. Packard, M.D., J. J. Reese, M.D., Albert H. Smith, M.D., Samuel Wagner, Esq., Charles K. Mills, M.D., L. P. Pritchett, Esq., Hampton Carson, Esq., and Frank Woodbury, M.D. It was resolved to form a society for the objects stated, and a committee was appointed to draft a constitution and by-laws. The next meeting will be held on the third Tuesday in February, when the permanent organization will be completed. About fifty members of the Philadelphia bar, and thirty physicians of prominence of this city, have already expressed their desire to join the Association.

PROF. WOOD'S LECTURE ON "DOCTORS AND HOW THEY WORK."—The second of the course of popular lectures given at Association Hall, under the auspices of the University of Pennsylvania, was given on Friday, the 18th instant, by Prof. H. C. Wood, who discussed the *raison d'être* of medicine-men and the methods of a past age as compared with those of the present day. Incidentally, homœopathy, or, more correctly, Hahnemannism, was considered, and, although declared in itself to be absurd and false in its claims, yet it was said to have exerted a great influence in the genesis of modern medicine, by demonstrating the recuperative powers of nature, and the benefits of doing nothing rather than adopting heroic medication in self-limited diseases. The lecture-hall was filled by an intelligent and attentive audience.

THE ANNUAL MEETING OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY was held

January 2, when the following officers were elected for the ensuing year: William M. Welch, President (second term); William S. Forbes and S. R. Knight, Vice-Presidents; Henry Leffmann, Recording and Reporting Secretary; M. S. French, Corresponding Secretary; L. K. Baldwin, Treasurer; C. M. Seltzer, Librarian; H. St. Clair Ash, Censor. Among the candidates to be balloted for were the names of two women physicians, who failed to get the required two-thirds vote.

NOTES AND QUERIES.

A SCRAP OF HISTORY OF PERKINS'S TRACTORS.

The publication of a new edition of Dr. Holmes's "Classical Essays on Homœopathy and Kindred Delusions" revives a temporary interest in Perkinism. The following hitherto unpublished extract may give a faint idea of the state of mind that prevailed in this country at the time this delusion prevailed. It is kindly contributed by Dr. W. Thornton Parker, and is an extract from a letter from Dr. Benjamin Parker to his son, Dr. W. Thornton Parker, Sr., dated November 11, 1842:

* * * * *

"I am much pleased with Holmes for the most part; but I have not had time to read him through. All about Perkinism is perfectly correct and true. I lived in those times, and was in the midst of the excitement. A gentleman in Virginia sold a plantation and took the pay for it in tractors, which tractors died on his hands. Nothing was more common than to buy horses and carriages with Perkins's tractors. But the worst effects of the delusion Holmes has silently passed over. The yellow fever prevailed in New York to a great degree, and proved fatal to thousands. Perkins thought he could cure the fever with his tractors, and went into the city while raging, and, as might be expected, he immediately fell a victim of his own folly."

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 5, 1884, TO JANUARY 19, 1884.

BROWN, P. R., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Huachuca, Arizona. Paragraph 9, S. O. 119, Department of Arizona, December 27, 1883.

BREWSTER, W. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Resignation accepted by the President, to take effect February 7, 1884. S. O. 10, A. G. O., January 12, 1884.

EGAN, P. R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon reporting of relief, to proceed without delay from Fort Huachuca, Arizona, to Fort Apache, Arizona, and report to the commanding officer for duty at that post. S. O. 119, Department of Arizona, December 27, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING JANUARY 12, 1884.

Surgeon D. McMURTRIE ordered to the Naval Rendezvous, Philadelphia, Pa.

Surgeon A. F. PRICE detached from the receiving-ship "St. Louis" on the 15th and ordered to the U.S. steam-ship "Ossipee" on the 22d.

P. A. Surgeon A. C. H. RUSSELL ordered to the U.S. steam-ship "Ossipee" on the 22d.

P. A. Surgeon H. C. ECKSTEIN detached from the Naval Hospital, Philadelphia, and ordered to the receiving-ship "St. Louis."

P. A. Surgeon HOWARD WELLS from the Naval Rendezvous, Philadelphia, and ordered to the Naval Hospital, Philadelphia.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 9, 1884.

ORIGINAL COMMUNICATIONS.

THE BACILLUS TUBERCULOSIS AND THE ETIOLOGY OF TUBERCULOSIS.—IS CONSUMPTION CONTAGIOUS?

SECOND COMMUNICATION.

*Read before the Philadelphia County Medical Society,
November 14, 1883,*

BY H. F. FORMAD, B.M., M.D.,

Lecturer on Experimental Pathology and Demonstrator of Morbid Anatomy in the University of Pennsylvania; Mütter Lecturer in the College of Physicians of Philadelphia.

GENERAL CONSIDERATION.

A LITTLE over a year ago* I had the honor of presenting for your consideration some anatomical points in refutation of the etiological relations of the bacillus tuberculosis.

At that time I announced some original observations regarding the histology of scrofulous tissue, tending to place the question of heredity in tuberculous disease upon an anatomical basis. These peculiarities of scrofulous tissues I submitted as elucidating the etiology of tuberculosis, showing that the peculiar histological condition of the individual, under the influence of simple irritants, and not the character of the irritant, is responsible for tubercular inflammation. It gives me pleasure to state that these observations have since been confirmed by several competent histologists, whose articles on this subject will soon appear in print; besides which a general interest has been manifested by favorable comments both in America and abroad.

Shortly before the publication of these observations, Koch, of Berlin, had brought forward the discovery of the now famous bacillus tuberculosis, affirming it to be the sole cause of pulmonary phthisis and other forms of tubercular disease, and claiming for it, besides exclusive pathogenetic properties, special morphological and chemical characteristics.

In my first paper I denied some of these propositions upon grounds of personal investigation, and subsequently Koch's re-

searches were also severely criticised by a number of other observers.

As interesting and valuable as the discovery of Koch is, from a biological stand-point, its practical value is decidedly overestimated, and has, in my opinion, not nearly the significance for medical science which the enthusiastic followers of Koch ascribe to it. The influence of the discovery was, however, great in strengthening the traditional and unwarranted belief in the contagiousness of phthisis, as held by a small part of the profession and community. On the other hand, this belief led to the popularity of the discovery. In this respect the bacillus theory has perhaps been harmful, and, taking the consequences into consideration, we should not accept such a theory without the closest scrutiny.

Two practical benefits may accrue from this discovery. The first is that the fear of the effects of the bacillus may induce greater cleanliness in hospital management and enforce improvement in hygienic matters in general. It is doubtful whether the removal and prompt destruction of the sputum would have any influence in checking the spread of phthisis, as the disease is found as often, if not oftener, in the clean palaces of the wealthy as in the unclean huts of the poor. The second advantage resulting from the bacillus theory may be that physicians may become induced to make more use of the microscope in diagnosis; yet in this respect the general use of the microscope is hardly practicable, on account of the thorough technique and experience required.

To-day, while the bacillus is acknowledged as a common morphological concomitant of tubercle, the pathogenetic properties are denied it by the best pathologists and clinicians, on account of a want of sufficient confirmation of the evidence thus far offered. The followers of Koch's theory are, however, numerous, but they are recruited largely from the ranks of clinical teachers, book-writers, and others possessing no opportunities for personal investigation.

It may be well to state that, upon my visit to Koch last summer, made with the purpose of doing justice to this important question, I was gratified in many respects. I found Koch an earnest and conscientious worker, and not as dogmatic and extreme

* Studies from the Pathological Laboratory of the University of Pennsylvania, xi.; "The Bacillus Tuberculosis and some Anatomical Points which suggest the Refutation of its Etiological Relation with Tuberculosis, by H. F. Formad," Philadelphia Medical Times, vol. xiii. p. 109.

in his views as would appear from his writings; nor is he as self-satisfied and as rash to jump at conclusions as are some of his followers. Koch has the co-operation of an excellent staff of assistants, all able mycologists; but it was a matter of surprise to me that there was not a single competent pathologist connected with his laboratory; and such services are evidently much needed to give to the observations made there the proper interpretation from a biological and anatomical stand-point. I was also pleased to learn in Berlin that the discovery of the bacillus was exaggerated not so much by Koch himself as by the Imperial Board of Health, which employs him, and by his over-zealous followers in the profession. There is strong evidence, however, that Koch's investigations are biased by the determination to find for each specific disease a specific fungus.

Following out the various phases in the study of tuberculosis, I am sorry to see that the entire subject is now being considered from a purely etiological basis with reference to bacteria, while the study of the anatomical and biological relations is wholly neglected.

I admire the beautiful bacteridian discoveries of Klebs, and particularly those of Koch in connection with the etiology of tuberculosis. The accomplishment of these results is a triumph for scientific botany and mycology; but these studies are much too one-sided to have an application to scientific medicine. The bacillus is there. It is concomitant with most tubercular lesions. It is diagnostic of tuberculous change. It is, on account of its irritant properties, one of the causes of tuberculosis. But this forms no reason for asserting that tuberculosis should be considered a contagious disease, without further investigation and proofs. A contagious disease can have only one cause. I cannot agree with those who define the predisposition to phthisis as being a condition of the organism which offers a favorable soil for the tubercle-bacillus. Nor can I believe that inheritance is explained by subsequent infection from cohabitation, *e.g.*, that children become scrofulous by living with consumptive parents.

The latest fruits of the bacillus studies have even inspired Baumgarten (*Centralblatt f. d. Med. Wis.*, Aug. 4, 1883) and several others to come to the conclusion,

in reference to the hereditary nature of tuberculosis, that the bacillus is transmitted in its larval state from mother to fetus in intra-uterine life! One would think, however, that one of the most wonderful effects of the tubercle-bacillus is manifested by the change it produced in the direction of reasoning powers of some of our pathological and clinical investigators, both at home and abroad. Some of the younger pathologists are even affected by a regular fanaticism for bacterian studies in tuberculosis. These studies now take the place of their former excellent pathologico-anatomical studies. Consideration is no longer given to the tissue-changes, or the nidus which invites the bacteria and nourishes them. In fact, Koch's followers in their enthusiasm exaggerate matters, and, to Koch's own amusement, go further in their bacillus speculations than he himself thinks justifiable. It is really painful to read how some of the younger German pathologists and a few of the prominent English surgeons, under the influence of the bacillus craze, will make in their publications assertions entirely unwarrantable. They describe, for instance, with the greatest ingenuity and exquisite minuteness, how "one or more bacilli" will produce certain histological changes in the lungs or in the peritoneum, designating the exact route to the same; how the different cells, the lymphatics, and the blood-vessels are affected; how the bacilli convert one variety of cells into another; how they manufacture giant cells and cheesy material; how acute and chronic phthisis is produced by the bacilli, and the quantity necessary for each; how tubercles develop only and exactly in those places where the bacillus becomes lodged; how, if bacilli alone are inhaled, miliary tubercles form; and how, if the bacillus is accompanied by some other irritants, a broncho-pneumonia will ensue.

All of the above statements are made by scientific medical men and pathologists, and offered as broad facts in full earnest! I only have to say that here evidently observation is substituted by imagination and mere speculation; and all this is done for the sake of the convenience in explaining a disease by pretty hypotheses.

The only men who attempted to repeat Koch's experiments, besides the work done in the pathological laboratory of the University of Pennsylvania, were Spina (*Studien über Tuberculose*, Wien, 1883)

and Watson Cheyne. Of the latter two scientists, Spina came to results entirely different from those of Koch, and they disprove beyond doubt some parts of Koch's hypothesis. From an analytical and critical point of view, Spina's studies of tuberculosis are excellent, but the technical part of his investigation is deficient, and hence not satisfactory. Watson Cheyne, to whom the "British Association for the Advancement of Science by Research" had intrusted the investigation of tuberculosis and the testing of Koch's researches, did not do justice to his mission. From Cheyne's report (*The Practitioner*, April, 1883) it is seen that he made no earnest attempt to study the nature of tuberculosis, because all he did was to study and experiment with bacteria met with in tuberculous lesions. He went to see some of the different mycologists, consulting only believers in the germ theory; obtained some French and German bacteridian material, and, after testing the same, he reports with great emphasis that Koch's bacilli are a more genuine tubercular virus than Klebs's or Toussaint's micrococci. He did not inquire, nor did he care, whether tuberculosis may have any other cause! He simply imitated some of Koch's experiments with the bacillus material in rabbits and guinea-pigs (only), and obtained, of course, the same results. Furthermore, he made some control experiments, which, as I will show, pass for naught, as they are much more deficient than those of Koch.

There are a number of excellent studies in reference to the occurrence of bacilli in the sputum and in tuberculous tissues; but the main part of Koch's hypothesis, *i.e.*, the etiological relation of these bacilli to tubercular disease, remains still unconfirmed.

My own researches on tuberculosis were made from a stand-point different from that of Koch, and they were undertaken five years ago, being carried on continuously since that time by myself and assistants. My object was to investigate the natural history of the disease, without being influenced by any preconceived views. While due attention was paid to external agencies in the production of tuberculosis, the part played by the animal or human organism itself, the behavior of its component cells, and the primary

changes in the tissues were not lost sight of.

I may state that I was fortunate enough to be able to utilize the material of over four hundred cases of tubercular disease from the autopsy table, including a number of cases studied in the pathological institutes in Europe at various times.

My present research on tuberculosis, with special reference to the bacillus question, was carried on during the last year and a half, under the auspices of the provost of the University of Pennsylvania, Dr. William Pepper. This communication should not be considered a report on my investigations, as these are not yet concluded; but a detailed report of these investigations will be made next summer. Some of the positive results achieved will, however, be referred to in the present paper; otherwise it merely embodies a general critical survey of the question of the etiology of tuberculosis, based upon a careful perusal of the literature of the subject and upon personal observation.

I may state, at the outset, that while the results of my observations force me to-day to make some concessions to Koch, namely, that his bacillus, on account of its irritative properties, can produce tuberculosis under certain conditions, I am firmer than ever in my former conclusions, from the results of repeated observations, that tuberculosis may arise from other causes. The bacillus may be one of the causes, conditionally, but it is not THE cause. The question of predisposition stands in the way of the acceptance of the bacillus theory. Furthermore, I will try to show that tuberculosis is not a contagious disease, and it is particularly in reference to this that I am glad to bring the present subject before the Society, desiring to profit by the discussion which is to follow as a result of the experience and the clinical observation of the individual members of the Society.

The question of the contagiousness of phthisis is one of supreme importance, not only from its scientific but also from its social aspects.

For convenience in treating the subject of the etiology of tuberculosis, I shall speak of it under the following headings:

1. The definition, the anatomical character, and the etiology of tubercular lesions, including pulmonary phthisis.

2. The predisposition; the predisposing conditions; scrofulosis.

3. Tuberculosis without predisposition, due to inflammation of serous membranes.

4. Question of contagiousness; clinical aspect.

5. The bacillus tuberculosis.

6. Experiments "pro" and "contra;" traumatic tuberculosis.

Conclusions.

All these considerations will have to be of necessity very brief.

1.—THE DEFINITION, THE ANATOMICAL CHARACTER, AND THE ETIOLOGY OF TUBERCULAR LESIONS, INCLUDING PULMONARY PHTHISIS.

No definite understanding concerning a disease can be arrived at unless some fixed conception of the anatomical characters and various expressions of the lesions of that disease is formed. Thus, as regards the question of tuberculosis and pulmonary phthisis, the matter would be much simpler if a general understanding could be arrived at as to the definition of tuberculosis and phthisis in its different anatomical manifestations. The pivot of the question is what to call a tubercle or a tubercular lesion.

The traditional conception of a tubercle being a miliary node, the belief is that nothing is tuberculosis unless expressed by nodes, and that everything is tuberculosis that appears to the eye as containing nodes. These misconceptions are what bring the confusion and prevent the settlement of the question of tuberculosis, both at the post-mortem table and in the hands of the experimenter.

One of the results of this confusion is that some clinicians divide pulmonary phthisis into catarrhal, cheesy, fibroid, and tubercular proper, because they do not see tubercle nodules in some of these forms of phthisis. They seem not to be aware of the fact that miliary tubercles do not belong necessarily to the picture of pulmonary phthisis; and, on the other hand, that those nodes which occasionally appear as miliary tubercles are not miliary tubercles at all, but are only miliary foci of broncho-pneumonia, due to aspiration, as will be explained later. Miliary tubercles, if at all present, usually form a part of a general disease, a tuberculosis of the whole body. In rare instances, when the miliary eruption takes its departure from the lung, the miliary nodules may be limited to the lung.

A more serious matter is the mistake that

experimenters make of interpreting as tubercles the so-called inhalation tuberculosis, artificially produced in animals by means of a spray with tuberculous and other matter. The nodules produced in the lung under these circumstances are not miliary tubercles,—in fact, no tubercles at all. They are simply miliary broncho-pneumonic foci, limited to those terminal collections of air-vesicles, called acini, in which some of the inhaled irritative material became lodged. The natural round boundaries of these acini correspond exactly to the usual size of miliary tubercles, and appear as such even under the microscope, although filled merely with an unorganized inflammatory exudate. The uniform distribution of these foci is due to the fact that the inhaled irritating particles are distributed only to individual and the most accessible bronchioles and acini, thus simulating a true miliary tuberculosis of the lung. Similar broncho-pneumonic foci occur in the human lung from self-aspiration of tuberculous material from a primary focus to some other portion of the lung or throughout the whole lung. This was proved long ago, but the inhalation experimenters appear not to be aware of that fact. Careful personal observations and experiments, to be recorded in my forthcoming report, have convinced me that such inhalation experiments prove nothing, either for or against the contagiousness of tuberculosis, in connection with which they have been brought forward as the strongest affirmative proofs. Furthermore, it must also be remembered that the so-called experimental inhalation tubercles, as a rule, remain local.

On the other hand, miliary nodes or tubercles are met with, not only in tubercular lesions, but also in a variety of similar and dissimilar lesions, such as pearl disease or bovine tuberculosis, lupus, leprosy, glanders, actinomycosis, chancre and gummata, cancer, typhoid infiltration, lymphomatous and leukæmic lesions. All these lesions, even cancer ("miliary carcinosis"), are able to give rise to exquisite miliary disseminations, or eruptions, although these are most frequently observed in tuberculosis. We already recognize leprous, lupous, glanderous, syphilitic, and other tubercles, in contradistinction to tuberculous or scrofulous tubercles.

To the above nodular formations may be added a variety of minute inflammatory

foci of granulation tissue, organized around minute foreign bodies introduced experimentally into various tissues; also, "false tubercles," such as mere unorganized collections of lymphoid cells, held together by some fibrine or by some artificial or natural round boundaries, such as is the case with the referred-to "inhalation tubercles;" and further, also, the eruption and follicular enlargements in the skin and mucous membranes.

The question now arises, how to distinguish between these various kinds of nodules, apart from their clinical features. They may all undergo a cheesy or a fibrous change, may calcify, and may contain giant cells. In all, bacilli may be found if a cheesy change occurs, or tends to occur, save in cancer and in leukæmic formation. Without desiring to appear sceptical, I must say, however, that it takes the skill of a Koch to differentiate sometimes the bacilli met with in the various kinds of nodes, even after applying all micro-chemical tests.

The true tuberculous tubercles occasionally do not show any bacilli whatever, as I will prove from personal observation, and from the reliable testimony of others. It will also be shown that the only test now left for determining the pathogenic peculiarity of tubercle—namely, the asserted exclusive property to produce tuberculosis—is conditional and uncertain, since substances not tuberculous may, under similar conditions, have the same effect.

Therefore, it is impossible to define tuberculosis, either by its anatomical peculiarity or by the pathogenic property of its nodes.

Another important point in the natural history of tuberculosis is the cheesy degeneration of its products; but here, again, we are surrounded by difficulty if we take only the cheesy product into consideration, because all the lesions mentioned before as being characterized by, and as being capable of, nodular eruptions, have the tendency to undergo cheesy change. Besides this, simple inflammatory products have been observed to undergo a similar change, as is instanced by that form of cheesy hepatization sometimes following croupous pneumonia, and also by certain forms of rapid necrotic changes, such as occur in acute septic inflammations, designated lately by the name of "coagulation

necrosis." It must, however, be remembered that the total absence of cheesy masses in the body of tuberculous subjects has been observed.

To tell tuberculosis from allied lesions is only possible after a consideration of the soil in which it develops, and the location of the products, together with the clinical and anatomical manifestations.

What is the origin of tubercle nodules?

The primary occurrence of miliary tubercle nodes is, to my mind, very questionable. I have never seen it occur without the coexistence of diffuse granulation tubercle. This granulation tubercle is recognized by all as being a simple inflammatory granulation tissue, characterized by cells somewhat larger than ordinary lymphoid cells, containing usually giant cells, but undergoing very readily cheesy change on account of its deficiency in blood-vessels. This tissue is regarded by most pathologists as secondary to miliary tubercles; but I think, after careful observation, that the reverse is the case; because I have never seen upon the post-mortem table, or in animals, *primary miliary tubercle* nodes without the granulation tissue, while the granulation tubercle tissue does exist very frequently without the nodes. Moreover, primary *miliary* tuberculosis is unknown.

That tubercle is primarily a simple granulation tissue of inflammatory origin has been proven experimentally. E. Ziegler (*Centralbl. f. d. Med. Wis.*, 1874, No. li.) made the following interesting experiment. He inserted below the skin or into the peritoneum of animals, a number of pairs of glass covers, each pair glued together in such a manner that between them there existed an interspace just large enough to allow the entrance of white blood-corpuscles: and these corpuscles, not being severed from the body of the animal, then formed a tissue between these plates of glass, which, upon removal after various periods, could be readily examined under the microscope, and the conditions of tissue-formations traced. Under these circumstances it was observed that whenever blood-vessels had developed in the new-formed tissue between the glass plates, an organization of the cells into a perfect connective tissue took place; but, when the formation of blood-vessels had failed to occur, then a tissue simulating tubercle

tissue was formed, made up of epithelioid and giant cells, and cheesy changes had occurred. Ziegler very properly declared the latter product to be tubercle tissue. I have had, and have at present, ample opportunity to corroborate the accuracy of these observations. Ziegler's experiments were repeated in the pathological laboratory of the University of Pennsylvania, by Hammer, and at present are being carried on by Woodnut. By these experiments, made, with slight modification, after the method of Ziegler, under varying conditions and upon various animals, it was shown that the granulation tissue gradually gave origin to tubercle nodules. Furthermore, these experiments showed that the tubercle nodes and cheesy changes ensue without the action of bacilli, as the latter were found not to be present when proper care was taken, during the execution of the experiment, to exclude them.

From the examination of tubercular tissue from various sources, I may say that I have seldom succeeded in finding tubercle bacilli in newly-formed tubercular tissue made up of small lymphoid cells. In older tubercular tissue, made up of opaque epithelioid cells and giant cells with a nodular arrangement, particularly when this tissue is undergoing necrotic change, bacilli are quite common, except in some forms of tubercles of serous membranes, to be referred to later. Tubercle tissue that has undergone a complete cheesy change contains the greatest number of bacilli. Cheesy matter of any source is a dead substance, and it is usually inhabited by bacilli, if these get access to it; while other bacteria are scarce in this nidus.

Examination of materials from the autopsy table shows that tubercle expresses itself in various manners. Primarily tubercle occurs as a mere infiltration of lymphoid cells in the adventitia of blood-vessels, or as small nodular masses of lymphoid infiltration around blood-vessels or ducts of any kind; or tubercle tissue may organize within blood-vessels and various ducts. Sometimes tubercle appears as a diffuse lymphoid infiltration, extending over a larger area, showing a greater or less tendency towards the formation of nodes and cheesy or fibroid change, as in the lungs. Tubercle tissue may form masses of the size of a hen's egg, particularly in the brain and serous membranes.

In the lungs, in racemose glands, and in mucous membranes, catarrhal changes always follow the tubercle infiltration. On serous surfaces primary tubercles appear often as flat or nodulated patches of various sizes (in peritoneum), or as fungoid vegetations (in synovial cavities), or even as large plastic masses (in omentum). In the skin and mucous membranes, tubercles produce eruptions, ulcers, or nodular indurations; in bones—caries, with abscess formation in surrounding parts (cold abscesses). Fibroid capsules, made up of connective tissue, due to reactive inflammation, enclose often smaller or larger tubercular masses, especially if these have undergone cheesy change.

Primary tubercle manifests itself quite variously in different animals. In guinea-pigs and rabbits, it appears mainly as small cellular infiltrates; in dogs, it often undergoes a fibroid change; in goats, and especially in cattle, tubercle often forms large nodular, sometimes pedunculated masses which often calcify;* in birds it forms, preferably in the liver, large round mulberry masses, which, on section, appear sometimes as horny radiating structures.

Secondary tubercle presents an aspect entirely different from primary tubercle, and it manifests itself in nearly all instances in but one form, namely, as a fine miliary eruption representing those well-known gray, semi-transparent nodules, of the size of a millet-seed, called miliary tubercles. These seem to lie in the perivascular lymph-spaces, and are probably distributed throughout the body mainly by means of these lymph-channels of the blood-vessel walls. Tubercles do not occur in avascular tissues. There is, however, a second form of embolic or metastatic tuberculosis which evidently distributes itself by the blood-current proper, and it appears in the form of conical masses or round nodes which may reach the size of a walnut and are located usually at the bifurcation of arteries. No mention of this form of tubercle is made in text-books, although upon the post-mortem table this variety of tubercle is a very common occurrence. Especially is

* I have met with, on the autopsy table of the Philadelphia Hospital, two cases of tuberculosis in man that were identical in every respect to bovine tuberculosis. Dr. Creighton, of Cambridge, England, describes a number of cases from his own observation, and collected from literature. *Bovine Tuberculosis*, London, 1881.

it seen in the lung, and, more rarely, in the spleen and liver.

Taking into consideration the enormous frequency of local tubercular lesions (counting pulmonary phthisis in this category), the occurrence of secondary or true miliary tuberculosis must be considered a rare affection. A tuberculosis affecting the lining of even the whole peritoneal cavity, including its lymphatic glands, or that of the pleural sacs, or that involving one or both lungs, must, when occurring thus in but one locality, be considered a local tuberculosis. In such instances, the tubercle spreads by continuity of structure.

It is a fact, established by Virchow, that tuberculosis is at first a local disease, and only becomes generalized secondarily. This generalization does not affect the blood, as in the infectious diseases, but it takes place simply as an embolic process, as in some tumors. Local tuberculosis in external organs and accessible lymph-glands is often a harmless affection. It is strongly related to primary tumors. Complete early removal of local tubercular lesions is practised successfully in Europe. Volkmann and others have removed, for instance, lymphatic glands, testes, and joints affected with fungoid synovitis, with the object of preventing secondary tuberculosis, and have thus prevented a general miliary tuberculosis.

Nor should a gloomy prognosis be given in early phthisis. It is astonishing what a large number of healed cavities and cicatrices in the apices of lungs are found on the post-mortem table, indicating the healing of phthisis in persons who long subsequently died from some other causes in later life.

We have seen that tuberculosis manifests itself quite differently as to structure, appearance, distribution, and determination, in the various animals, and even differently in the various organs of one individual. Our studies have shown that these variations in the expression of tuberculosis depend upon the structural peculiarities of the various kinds of animals, and sometimes even upon the difference of the structure in animals of the same species.

We have also seen that even in human beings tubercle tissue may manifest itself in various forms. In some individuals it develops rapidly, and spreads over large

areas, becoming generalized and undergoing speedy cheesy change; in other individuals it develops slowly, fibroid change predominating; and in others the tuberculous product may calcify. In most individuals tubercular lesions may remain entirely local.

It is well known from clinical experience that the general condition of the organism has very much to do with the healing of a local tuberculosis. A local tuberculous inflammation may heal or become arrested in its progress, if the patient "gets strong," or it becomes more developed and aggravated if his general health "runs down." Observation has further shown that any simple, non-specific wound in a weak, ill-nourished individual may fail to heal, becoming unamenable to treatment, and probably assuming a tubercular character.

In some animals spontaneous tuberculosis is unknown, and while some animals are easily tuberculizable experimentally, in others tuberculosis cannot be produced.

It is in accordance with experience that in a large number of families the predisposition to tuberculosis is hereditary, and that their members die promptly of phthisis at a certain age from the effects of a simple "cold," while in the history of other families this affection is unknown. Every individual is liable to acquire syphilis, smallpox, and other contagious diseases, but it is proven that not every one can have tuberculosis. A special predisposition and a special individual are required. In such an individual, a simple inflammation resulting from any cause whatever can produce tuberculosis.

Therefore, for the development of tuberculosis two conditions are necessary:

1. A *definite* soil.
2. An *indefinite* irritant.

The reaction of the soil is always the same under the influence of any irritant, whether that irritant be a bacillus or not; since the result (tuberculosis) following a lesion in such a soil depends upon the character of the soil, and not upon the character of the irritant, even though one irritant, say bacilli, may act more readily than other irritants.

In view of the demonstrated fact that simple injuries of any kind can excite a tuberculosis, but only in certain individuals and tissues, it is evident that tubercu-

lization is determined by the kind of soil, and not by a specific irritant. *Tubercle should therefore be defined as being an inflammatory new formation in a specific individual or tissue.*

What is the place for tubercle in pathology? The anatomical criterion for tubercle is a granulation tissue made up of lymphoid or epitheloid cells, which, on account of deficiencies in the soil, does not undergo any higher organization or tend to heal, but tends to form nodes and undergo cheesy change. Under favorable circumstances it may heal through fibroid change. The elements of tubercle tissue may spread by continuity of structure to surrounding parts, and occasionally tend to the production of metastasis, distributing themselves by means of the lymphatic system principally, and rarely by blood-vessels; and may generalize themselves through the whole body, forming miliary nodes or tubercles.

This miliary eruption of tubercle appears to have the same relation to the primary tubercular growth as the secondary metastatic cancer eruption has to the primary cancerous growth. Like in cancer, the elements of tuberculosis may be arrested temporarily by the lymphatic glands governing the affected region.

In tuberculosis lymphoid cells form the nodes; in cancer, epithelial cells. While secondary cancer nodes are, as a rule, much larger than tubercular nodules, on account of the well-known great proliferating power of epithelium, it is also a fact that cancer may appear as a miliary carcinoma, expressed by minute nodules not distinguishable macroscopically from miliary tuberculosis. Cancer is proven to be a local disease. It is not contagious. It is infectious only to the individual who is affected by it; *i.e.*, it is self-infectious. And so is tubercle in every respect, a local, self-infectious disease.*

That local manifestation of tuberculosis

in the lung which is designated by the traditional name of pulmonary phthisis forms perhaps nine-tenths of all tubercular lesions, and hence deserves some special consideration.

I class myself with those who regard all forms of pulmonary phthisis as tubercular. There are only three or four lesions of chronic wasting disease of the lung which may be excluded from phthisis. These are atelectasis, or collapse from pressure of effusions; bronchiectasis, in which the enormous dilatation of the bronchi may lead to large cavities and atrophy of lung-structure; primary fibroid changes; and abscess of lung. Yet all these lesions may become tuberculous from secondary inflammatory changes, which usually follow.

The lesions that are known as catarrhal pneumonia, broncho-pneumonia, pneumonic phthisis, cheesy pneumonia, tubercular phthisis, and fibroid phthisis are all manifestations of the one disease. Such a classification may be, however, entirely justifiable and useful for practical clinical and therapeutic purposes. Pathologically considered, phthisis is a local tuberculous inflammation of the lung which may manifest itself in various ways, the appearances depending upon the duration of the disease, the mode of onset, and the constitution and condition of the patient. Lesions representing the different forms of phthisis, and their transition from one form to the other, are often seen in the same lung.

Virchow insists that nothing should be considered tubercular unless it shows true tubercle nodules, and hence he does not recognize cheesy pneumonia—or cheesy hepatization, as he calls it—as tubercular, although he does not object to the term phthisis for this lesion.

I was fortunate enough to attend several times the classical demonstrations on this point of Virchow, the father of the view of the dual origin of cheesy matter and phthisis; yet, from our present knowledge of what constitutes tubercle, I cannot help interpreting all the forms of phthisis as of a unitarian origin. It is, after all, as Virchow himself says, only a matter of nomenclature. If we consider the presence of bacilli of Koch as the differentiating point between what is tubercular and what is not, we find that catarrhal and cheesy pneumonias are the most tubercular of all,

* Cancer and tubercle are considered analogous lesions and classed with tumors by a number of pathologists. This fact would not make it inconsistent to call tubercle an inflammatory product, as the distinction between inflammatory processes and tumor-formation is a purely arbitrary one. Virchow pointed out that the majority of tumors are purely inflammatory products (a statement antedated twenty years by Prof. S. D. Gross). A few years ago I made the question of the etiology of tumors a subject of careful personal study, which I yet continue, and I am forced to the conclusion that *all* true tumors are inflammatory products, and that no line of distinction can be drawn where the process which we call inflammation ends and where tumor-formation begins. (The Etiology of Tumors. Transactions of the Pathol. Soc. of Phila., 1881.)

because they contain, as a rule, more bacilli than any other form of phthisis.

Although cheesy pneumonia, like all forms of phthisis, remains commonly a local affection, it is seen on the autopsy-table to give rise to miliary tuberculosis at least as often as any of the other forms of local tuberculosis.

We are then at present at the same stand-point in regard to the character of tubercle and cheesy matter as Laennec (1819); and it is indeed perfectly reasonable to suppose that any cheesy matter found in a scrofulous person or animal is tubercular. Of course it is evident that tuberculosis of the lung is usually accompanied by simple inflammatory products, such as organized connective tissue (chronic phthisis), or unorganized croupous and catarrhal exudates (predominating in acute phthisis), which may undergo rapid necrotic and purulent changes, resembling cheesy material. For the latter products the name "coagulation necrosis," as applied by the Heidelberg and Leipsic people, may be employed. Tubercle-bacilli are commonly found in this coagulation necrosis. True tubercular cheesy matter should, I think, be considered only that product which is derived from the breaking down of previously well-organized tubercle tissue.

I need not refer to the details of the manifestation of tubercle in the lung, as these are too well known. But I would like to remark here that those small whitish or gray nodules, usually of somewhat irregular shape, which are seen more or less densely scattered throughout the parenchyma of lungs affected by phthisis, are not miliary tubercles, but minute foci of broncho-pneumonia.*

These minute broncho-pneumonic foci take their origin from tuberculous matter disseminated by means of air-passages, as explained before. *Miliary* tuberculosis of the lung distributes itself by means of the perivascular lymphatics, is very rarely accompanied by catarrhal changes or hepatization, and rarely arises from a primary tuberculous focus of the lung itself; it is, as a rule, a part of general tubercular disease.

(To be continued.)

* See, in connection with this, the excellent studies of William H. Mercur, from the pathological laboratory of the University of Pennsylvania, published only in abstract form in the *Phila. Med. Times*, July, 1883.

RUPTURE OF THE UTERUS DURING LABOR, WITH AUTOPSY.

BY C. W. DE LANNOY, M.D.,

Chester, Pennsylvania.

THROUGH the kindness of my friend and colleague Dr. J. L. Forwood, I assisted at the following autopsy, and obtained the history of this interesting case.

Mrs. X., an Irishwoman, about 43 years of age, who had been previously delivered without trouble of several healthy children, sent for him to attend her in labor. When he reached her house the labor had been in progress several hours, and at the time firm and periodical contractions indicated that the uterus was normally active and promised speedy expulsion of its contents. A digital examination, which was made immediately, revealed a breech presentation, with only partial dilatation of the os. No pressing interference being deemed necessary, the patient was made as comfortable as possible, and, under the continuance of active uterine contractions, dilatation of the neck was waited for. At the end of four hours from the beginning of labor the os seemed to be sufficiently open to admit the presenting part, but the latter had not as yet engaged in the superior strait. Suddenly, on the occurrence of a pain, the face of the woman assumed an anxious expression, the countenance indicating impending dissolution, and as the hand was passed into the vagina a foot was felt to recede, as if drawn up by powerful suction. No external hemorrhage took place, and, although periodical uterine or possibly purely abdominal contractions continued, she perished within half an hour after the accident.

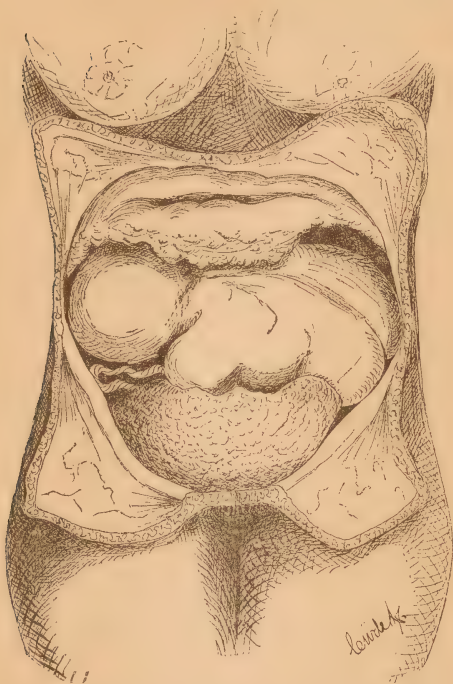
Autopsy.—The body was that of an unusually fleshy woman, with an enormously tumid abdomen. Percussion elicited a marked impression of solidity, but afforded no signs of a double pregnancy; the greatest abdominal diameter was from side to side, and the protrusion of the lateral regions was extraordinary. Making the prescribed crucial incisions, we found the abdominal walls unduly thin, and devoid of adipose, so abundant elsewhere. The child, with its back to the front and head to the right, occupied the entire transverse diameter of the abdomen (see Fig. 1), the left posterior axillary terminus falling beneath the umbilicus of the mother; the right side of the foetal head and back were covered by the

omentum, and the buttocks were thrust into the upper part of the left maternal groin. Below the foetus, and between it and the symphysis pubis, was the placenta, occupying a central position, with its maternal surface in contact with the parietal peritoneum. The umbilical cord was visible between the left ear of the foetus and the upper placental margin. After taking the sketch (Fig. 1), we removed the pla-

were normal, with a slightly exaggerated sacral prominence.

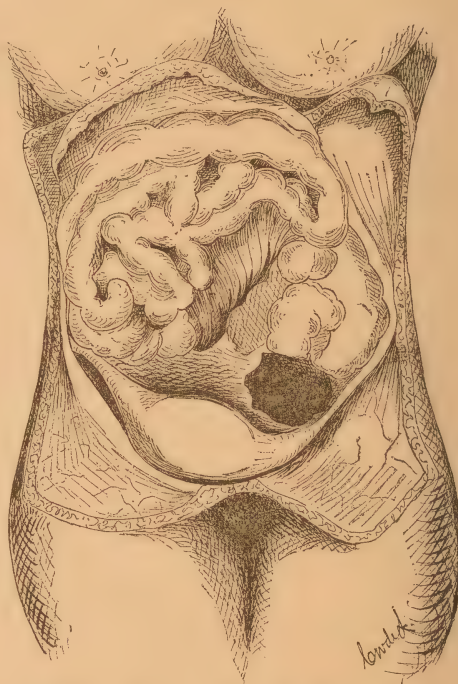
It must be assumed in this case that rupture of the cervico-uterine walls was the result of combined causes. The foetus was extremely large, and must have weighed fourteen or fifteen pounds; it had evidently expired some days previous to the onset of labor; at least the advanced stage of putrefaction in which we found it could not be

FIG. 1.



Position of foetus and placenta after rupture of the uterus.

FIG. 2.



Peritoneal laceration. Case of rupture of the uterus.

centa and foetus, throwing up the omentum and transverse colon, which partially covered the latter. The concave foetal surface of the placenta fitted like a cap over the fundus of the womb, which was in a position of extreme ante flexion and slightly inclined to the right; then, dragging the buttocks of the child from the left iliac fossa, we found the feet still buried in the large peritoneal laceration represented (Fig. 2). The small intestines were all crowded up into the right hypochondrium, apparently retained there by the foetal head; they contained little or no gas, far less than is ordinarily met with in average autopsies. The abdomen contained about one quart of blood, with but few clots, of small size. The pelvic diameters

otherwise accounted for. We might reason from the above premises that a large, dense mass, exercising great pressure upon a disproportionately thin-walled cavity, would alone exert influences tending towards rupture; but when, in addition, we have the evil effects of putrefaction, which would bring about softening of the mucous membrane and muscular fibre of the womb, the probabilities of so serious an accident would become imminent. The transverse position of the foetus would lead one to infer that it had escaped into the peritoneal cavity head-foremost; and such was my opinion previous to consideration of the facts incident to her labor. The breech presented at the mouth of the womb, and a foot was felt in the vagina

immediately after rupture was supposed to have taken place. The rent in the walls of the womb was situated at the junction of neck and body, involving both of these parts. The foetal head at the time of rupture still occupied the fundus of the womb, and could not have found egress through an opening situated low down at the brim of the pelvis. It will be further noticed, by referring to Fig. 2, that while it is in the course of nature for the uterus to contract down after voidance of its contents, per vaginam or otherwise, we have in this case an unusually marked disproportion between the sizes of foetus and contracted uterine tissue. The inference is that, like the abdominal parietes, the uterine walls were unusually thin, and, although the peritoneal rent seems small, it was no doubt a large one before its outline had narrowed down in obedience to uterine contraction. Further, the position of the foetus in its extra-uterine habitat may have been influenced, determined, or even radically changed by the periodical contractions of the abdominal muscles subsequent to the rupture: this latter phenomenon was maintained for half an hour, the time which elapsed between the supposed occurrence of rupture and a fatal issue.

To sum up the etiological value of both clinical history and post-mortem appearances, it would seem that in this case the obstacles opposing the escape of the foetus from the cavity of the uterus were, first, the walls of that cavity, and, in the second place, the ordinary resistance of the uterine neck previous to complete dilatation; of the two the former proved least difficult to overcome, and hence delivery by other than *per vias naturales*.

October 10, 1883.

HOT WATER—AN OLD REMEDY REVIVED.

BY W. THORNTON PARKER, M.D.

SO much attention has been given of late to the use of hot water as a remedy of the first importance in many diseases that I believe a few remarks on this subject may be advisable.

The number of diseases and of injuries which can be successfully treated with hot water is very much greater than most people seem to be aware of. I have under observation at present some very interesting cases where the treatment by hot water

seems to be succeeding remarkably well. I refer to the internal or "therapeutic" use of hot water. There is, of course, great difference between using this remedy after the manner recommended by Dr. Salisbury and taking a gobletful occasionally. The use of hot water as a remedy in serious disorders must be employed systematically and perseveringly.

After severe mental or bodily labor, where a sense of exhaustion is experienced, the use of hot water is likely to afford an immediate sensation of relief, increased strength, and even exhilaration. Unlike the effects of alcoholic stimulants, this improvement continues for a long time; the appetite is stimulated, a general improvement actually taking place. The use of hot water immediately before meals is not the course recommended by Salisbury, although it is undoubtedly desirable for many and does act as a tonic of no little value. It is well known that in early colonial times, and indeed until quite recently, the custom of serving at meals hot water for "sipping" was quite general and very highly approved of in our best society. It is not improbable that, in view of the high authorities recommending hot water, and the very remarkable cures attending its use at the present time, we may have a revival of this time-honored custom.

Nearly fifty years ago there appeared in England a collection of essays, by Thomas Walker, M.A., called "The Original." In 1875, Dr. Guy published a revised edition of "Walker's Original,"* and from "The Arts of Life," part ii. page 94, I will quote from Walker's essay on "Hot Water," and Dr. Guy's note on the same:

"Having said much about wine, I will not omit all praise of hot water, the efficacy of which on many occasions in life is very great and cannot be too generally known. I will begin with a remarkable cure effected by it on myself. Many years ago, when I was laboring under what I supposed to be an attack of common sore throat, I rode some miles on horseback, with a north wind in my face. I then got into the mail, and travelled nearly two hundred miles, and at the end of my journey I could scarcely speak or swallow. In the morning I was still worse, and on attempting to force down a little coffee I

* The Original. Fifth Edition. Dr. Guy. London: Henry Renshaw.

found it utterly impossible. In this extremity, a physician, now among the most eminent of his profession, called upon me, partly through accident. He told me I had got a very bad quinsy, and he immediately ordered a kettle of hot water, recommending me, to gargle with it as hot as I could bear, and continually. As we were on intimate terms, and he was then only commencing practice, he remained with me two or three hours to enforce his prescription. I found so much benefit that after he was gone I persevered till night, at which time I was enabled to take food without difficulty, and in the morning there was no trace whatever of the attack, nor have I ever experienced another, though I was told it would most probably be the case. The medicine ordered me I did not taste, and the sole glory of my rapid and complete cure is due to the hot water. I have never had even a common sore throat since, or I should certainly try the same remedy, though I never heard of its being so applied."

Dr. Guy's note is as follows: "This is a good example of the fallacy of many popular opinions on medical matters. From the author's description of his attack, it is obvious that the quinsy had arrived at that stage at which the only possible relief is by a discharge of matter. Hot water could have no curative effect in such a case; but, through a happy coincidence, art earned the credit due to nature."

This statement by Walker, made so long ago, although severely rebuked by such eminent authority as Prof. Guy, is, after all, correct in practice. I have repeatedly treated cases of quinsy, entirely depending on hot water from first to last. I would recommend the use of hot water not only as a gargle, but taken in the manner recommended by Dr. J. H. Salisbury and Dr. Ephraim Cutter, which I will refer to again before closing this article. During the past summer three cases were treated successfully by this method, and I am sure would generally be found successful. Walker also recommends hot water in bruises, which he considered "most efficacious, both by means of immersion and fomentation, in removing pain and totally preventing discoloration and stiffness. It has the same effect after a blow. It should be applied as quickly as possible, and as hot as can be borne." He also recommends immersion in hot water for the fin-

ger suffering with whitlow, and this is certainly good treatment to-day. Where the fingers have been crushed in shutting a drawer or a door, he considers hot-water treatment better than anything else. "*The efficacy of hot water in preventing the ill effects of fatigue is too well known to require notice.*" In the *Lancet* for November 24, 1883, Dr. Jackson reports some cases of gout and gravel relieved by using hot water as recommended by Cutter in the *Lancet* of September 15, 1883.*

It is, however, in phthisis that the hot-water treatment exhibits its remarkable value, and Salisbury's treatment must sooner or later win the good reputation it certainly deserves. In the treatment of dyspepsia and of constipation it has already won considerable fame. Its uses in gynecology are too well known to need any quotation, and Prof. Hamilton has employed it with excellent success in surgery.

Prof. Hamilton remarks,† "No treatment hitherto adopted under our observation has been attended with equally favorable results." It is hot water, and not warm water, which is recommended, of a temperature from 110° upwards to 150° Fahrenheit,—one or two gobletfuls, taken *gradually*, one hour or longer before meals; although half a gobletful may be taken directly before eating, by "sipping," as in the old fashion referred to. It is a very good plan to take hot water before going to bed, also after a long ride or walk and before bathing. Within ten days after commencing the hot-water treatment the good effects are noticed by the improvement in the general condition of the patient. "The sweat starts freely after drinking, giving a true bath from centre of body to periphery." "The skin becomes healthy in feel and looks." "The digestion is correspondingly improved, and with this improvement comes a better working of the machine."‡

Dr. Cutter makes the following claims for the hot-water treatment:

"(a) Foundation for all treatment of chronic diseases.

"(b) Excites downward peristalsis.

"(c) Relieves spasm or colic of the bowels by applying the relaxing influence of heat inside the alimentary canal.

* I can also recommend it highly in cystitis, gonorrhœa, and prostatitis.—W. T. P.

† Quoted by Bartholow, *Mat. Med.*, 4th edit., p. 66, et seq.

‡ The Therapeutical Drinking of Hot Water. Dr. Ephraim Cutter.

"(d) Dilutes the ropy secretions of the whole body, and renders them less adhesive, sticky, and tenacious.

"(f) Dissolves the abnormal crystalline substances that may be in the blood and urine.

"(h) Use it to wash down the bile, slime, yeast, and waste, and have stomach fresh and clean for eating.

"(l) Promotes elimination everywhere."

Dr. Cutter strongly sustains the Salisbury theory of practice with hot water, and, without accepting all the claims made for this excellent old remedy, it must certainly be acknowledged that it has many advocates in this and other countries, and is a very popular as well as a very reliable therapeutic agent, and it also has the advantage of being very accessible and inexpensive. "There is nothing new under the sun!"

Certainly, it is no news to inform the medical profession that the debris and other contents of the stomach and bowels may be washed away and digestion facilitated by the use of copious draughts of hot water. It should be remembered, also, that serious injury may be done the mucous membrane and the secretory organs by a reckless use of this remedy.

Like all other therapeutics, the supervision of a medical man is needed, and without counsel no one should adopt this new treatment. As with many other excellent remedies, there is danger that too much may be attempted, and, from the inevitable injury resulting, a verdict of failure be given for the whole plan.

MOORESTOWN, N.J., December, 1883.

REMARKS UPON NIGHTMARE.

BY GEORGE HAMILTON, M.D.

FOR the first time within the recollection of the writer, an article upon this affection, or rather upon a complication of it with epileptic symptoms, appeared in one of our medical journals,—from the pen of Prof. H. C. Wood, in the *Medical Times* of December 1, 1883. In this paper Dr. Wood declares that "nightmare, as it usually occurs, is not of much moment;" and, so far as relates to the infrequency of a fatal issue, this is true, and hence, in part, the neglect to which it seems doomed by medical writers and lecturers. But may we not greatly err in regard to its fatality?

Of the numerous instances where persons, apparently in good health, retire to rest at night, and yet are found dead in the morning, how many of them, or how few, have succumbed to attacks of nightmare, it is wellnigh impossible to determine. The almost invariable custom, in such cases, is to give a certificate or render a verdict of apoplexy or disease of the heart,—whether there has been an examination of the cadaver or not. Now, it is generally admitted that, whatever may be the exciting or the proximate cause of nightmare, it is the vascular system, and notably the heart and brain, that are most involved in this affection, so that in this malady a post-mortem would probably exhibit appearances not very dissimilar.

As a case, in illustration, formed the basis of the paper of Prof. Wood, so in the present instance his example will be followed; it is not the purpose of the writer to treat of the subject generally, for with the usual phenomena of nightmare a large proportion of people are more or less familiar. The case to which allusion will now be made is, in the writer's experience, an exceptional one, if not in character, at least in severity, and is as follows:

A gentleman, far beyond middle age, had been in the earlier part of his life subject to repeated attacks of nightmare in its ordinary form, caused, as usual, by dreams of a terrifying character,—such as falling from elevated positions, attacks of wild beasts or savage dogs, or being waylaid in solitary places by men bent upon robbery or murder, etc. Not infrequently he would find himself in a vast amphitheatre,—the Colosseum, for instance,—witnessing the furious combats of gladiators or wild beasts, or the desperate struggles of men and horses for victory in the chariot-races,—during which, especially at the moment of victory, the shouts of tens of thousands would break forth with such astounding, unearthly violence that the terror of our subject, already beyond conception, would reach its ultimatum by the crashing down of the vast structure, burying everything beneath, and accompanied with a noise so fearful that all creation seemed rushing into general ruin. Scenes of this peculiar kind were to him far more frightful than those produced by ordinary agencies. The oppression of the chest and attendant sense of suffocation, usually felt, were nearly absent in this case, and he was, as often happens, unable to cry out or utter a word during the fit, but the moment this was over he regained the power of speech and the use of his limbs. Attacks of this sort, recurring at longer or

shorter intervals, continued up to his twentieth year, and did not return, unless at very remote intervals, till about his sixtieth year. From this period on, through many years, the attacks would not be ushered in from terror of wild beasts pursuing him, or from falling from great heights, etc., but would nearly always occur through the agency of human beings. He would hear one or more persons trying to enter his residence, or, having gained entrance, endeavoring stealthily, almost noiselessly, to gain admission to his chamber; or, more alarming yet, would perceive that they had already entered the room and were cautiously approaching his bed. In these attacks, as in those of earlier years, he suffered very little from oppression or sense of suffocation, and it was only after several years that he was able to utter a word even imperfectly, or cry out, and this noise would in some cases serve to awaken him; but generally he could only be aroused by the persistent efforts of his wife in endeavoring to change his posture, or calling aloud to him. But here we have the great distinction between the phenomena of his early life and those of his advanced years, for, as above stated, the moment the attack of his youth was over he could at once converse as well as ever, and assume whatever position or posture he preferred. On the contrary, in very many of the attacks of his later years, and this, too, even after being aroused from sleep, and conscious, too, of whatever was said or done, he would nearly always remain for a short time passive, having no power to move his limbs, nor could he speak so as to be understood for a much longer time, lasting on some occasions more than half an hour, and whilst in this condition his speech was precisely similar to that of paralysis, which, in fact, for the time being it was. In this connection it must be stated, as an important factor in reference to the pathology of the case, that, as a rule, so soon as he awoke he noticed that a more or less partial erection existed, without the slightest thought, however, or feeling of sensual character.

Prof. Wood refers in his paper to his paralyzed condition, and the horrible suffering, so intense in fact that although lasting but a few seconds it was conceived to be of almost infinite duration. This feature, then, in the single experience of Dr. Wood, is but the counterpart of what occurred in many of the attacks endured by the patient now presented. In fact, when asked to define the nature of this suffering, he would reply, "That is impossible," adding, "that all the terrors of his early experience could not be compared with the suffering of the later attacks;" and yet he was not conscious of physical pain of any sort, nor, as

said before, of oppression or sense of suffocation. Of fright or fear of death he had no thought, for the suffering, although indescribable as to character, was so inconceivably intense that instant relief was the only thing thought of, if indeed any rational conception at the moment were possible.

To endeavor to explain the extraordinary vagaries of nightmare, in reference to its physical causation, would be to attempt the impossible, whilst it is not beyond our province to seek an explanation of the phenomena just stated to certain pathological conditions. The generally accepted opinion that persons having enlargement of the heart or valvular affection are more disposed to nightmare than others is probably well founded. That such persons are subject to congestion of the heart, of passive character, must be admitted; and it is not unlikely that a large proportion of such cases as usually occur are due to this cause. But attacks complicated with paralysis cannot be thus explained; and as congestion of the heart cannot long continue without implicating the brain and upper portion of the spinal marrow in a similar way, the occurrence of the paralysis may thus be explained. It is well known that erection, complete or partial, has often been observed in case of execution by hanging, and here congestion must of necessity take place, and this incident would seem to show a relationship with what occurred in the individual referred to above.

In regard to the exciting causes of nightmare, irregularity and excesses in eating, drinking, or sensual indulgence, are, doubtless, deservedly placed among the more prominent. A rich, abundant, and late supper has justly been regarded as the cause of many attacks; but the patient referred to informed the writer that if he retired to rest with a void sensation from want of food he was much more likely to have an attack than if he had previously eaten a moderate portion of rather rich food; and this is unquestionably the fact in general experience. Mental agitation, even joyous, if in excess, depression or worry from any cause, are well-known agents in the production of this affection. For the prevention of nightmare many were the proposed remedies, material or magical, of the olden times; and whilst medicines of anodyne or antispasmodic nature have sometimes

appeared to forestall these attacks, it is now generally admitted that the avoidance of all noxious agents, temperance in the manner of living, and, so far as possible, control of the intellectual, moral, and emotional nature, will prove the most useful in guarding against attacks of this most frightful and, as it may well be feared, too often fatal malady.

1600 SUMMER STREET, PHILADELPHIA.

REPORT ON LARYNGOLOGY AND DISEASES OF THE NOSE.

BY DR. CARL SEILER,

Instructor in Laryngology at the University of Pennsylvania,
Lecturer on Diseases of the Throat and Nose in the University Post-Graduate Course, etc.

CYSTIC POLYPI IN THE UPPER AIR-PASSAGES.

IN a late number of the *Medical News* an article appeared by Dr. Lefferts on a case of cystic tumor situated in the posterior nasal chamber, which was not recognized as such by him at the rhinoscopic examination, and he was only made aware of the nature of the growth by the copious discharge of serum and the small amount of tissue brought away by the forceps. These cases are very rare, and besides the one recorded by Dr. Lefferts one other case only is reported in the literature on the subject. It has, however, been my good fortune to meet with four such cases, and in the second edition of my book I mention the existence of these cystic polypi. The last case I saw was interesting from the fact that the patient had previously suffered from fibrous polypi, and I will therefore give a condensed history of her case.

Mary H., a native of Virginia, presented herself two years ago at the dispensary for treatment. She said that, a year previously, her physician at home had removed several pieces of a tumor from her post-nasal cavity, but she had not been able to breathe freely through her nose after the operation, and that now she could not draw any air through the organ. On examination with the rhinoscope and with the fingers, I discovered a very large fibrous polypus filling the naso-pharyngeal cavity and extending into the right anterior nasal cavity, filling it completely. After several unsuccessful attempts I succeeded in getting a wire loop around the growth and removing it in its entirety. An examination after its removal showed the polypus

to have been attached to the posterior edge of the vomer. The patient was kept under observation for several months, and as there was no return of the growth she was dismissed as cured. A few weeks ago she again presented herself, saying the tumor had come back. On examination I saw a large polypus filling the right nostril, apparently springing from the posterior portion of the middle turbinated bone. The wire snare was introduced, but repeatedly slipped off, and, getting impatient, I resorted to the forceps. A very slight pull brought a large quantity of yellowish serum, which gushed out of the nostril. This made me aware of the nature of the growth, and, after removing the forceps, I saw, in the rhinoscopic mirror, the sac hanging from the middle turbinated bone. This was easily removed with the forceps, and after the hemorrhage had ceased and the parts had been washed I discovered quite a large polypus springing from the upper portion of the nasal cavity. This was easily engaged in the snare and removed, and proved on examination to be a fibrous polypus, the lower portion of which had undergone cystic change; there being a cyst the size of a small cherry.

IMPROVEMENTS IN LARYNGOSCOPIC APPLIANCES.

Among the improvements in instruments for the treatment of nasal diseases must be mentioned two changes made in the wire-snare originally introduced by Dr. Jarvis, of New York. One is the application of the instrument to the requirements of galvano-cautery by substituting platinum wire for the steel wire, and suitable attachments for the battery, by Dr. Jarvis himself; and a change made by Dr. Sajous, of this city, which consists in the substitution of a slender rod with an eye at the end for the long wire, which enables the operator to use small pieces of wire to form the loop and saves the trouble of fastening the ends. The instrument, however, loses thereby much of its lightness and delicacy, and it is a question whether the change is an improvement.

The last number of the *Archives of Laryngology* is replete with interesting articles, among which the one by Dr. French, of Brooklyn, on "Photographing the Laryngeal Image," is of peculiar interest, on account of the progress which he has made

in this difficult procedure. Ever since the laryngoscope has been in use a number of experimenters have attempted to reproduce the laryngeal image by means of photography, in order to obtain a picture which should be more satisfactory than a drawing, and should come nearer the truth than the conventional pictures seen in books on the subject. But none have attained the desired end except Dr. French and Dr. Lenox Browne, of London, who recently sent some excellent photographs of the living larynx to this country. But good as they are and true to nature, they also present the same outline as the drawings and lack the depth and perspective which make the image seen in the mirror so much more satisfactory. And I do not think it is possible to reproduce this perspective, except, perhaps, by making a stereoscopic picture and viewing it through a stereoscope, for only then can we expect to obtain a reproduction of the roundness and reality of the image. However, Dr. French and Dr. Browne have given us pictures which far surpass even the fondest hopes of the earlier experimenters, myself included, and open up a possibility that photography may become an important aid in the art of laryngoscopy.

As a curiosity in the literature of laryngology the following abstract from the *Therapeutic Gazette* deserves to be mentioned. Dr. Th. Dimmock, of New York, under the heading "A Novel Laryngoscope," gives the following directions for seeing the larynx without a mirror:

"Bring the patient near a good light of any kind, and after the mouth has been opened, place on the tongue a depressor; then request the patient to yawn. The larynx will immediately rise, and every part *necessary to be seen* will be brought fully into view." Quod erat demonstrandum. Had we not better throw our costly and cumbersome instruments away and, armed only with a tongue-depressor, go forth and study laryngoscopy? What a pity Dr. Dimmock did not precede Garcia and Czermak with his discovery! But perhaps what he thinks is necessary to be seen is only the tip of the epiglottis, and we had better pause in our mad career and retain the mirrors and other appliances so as to look a little lower down into the laryngeal cavity proper. It is true there are a

number of cases in which the epiglottis is erect, and its upper portion can readily be seen by depressing the tongue, especially when gagging sets in, but very little is gained from such a view, and intra-laryngeal disease cannot be diagnosticated nor treated without the laryngeal mirror.

TREATMENT OF TONSILLITIS.

The treatment of tonsillitis has of late been largely ventilated in the medical journals of this country and also in those abroad, and various remedies have been praised as specifics in this painful, and often recurrent, throat affection. Thus, for instance, a correspondent of the *Medical News* treats tonsillitis by the application of bicarbonate of soda, and claims that seldom are more than three applications of the dry drug necessary to cure even severe cases. There is no doubt that a mild alkali, such as the bicarbonate of sodium, is very soothing when applied to inflamed surfaces, and it is used largely in the treatment of burns on the skin, but in my experience it has failed to be more than a soothing application, and in spite of it many cases go on to suppuration. The same is true of the application of the gum-resins so highly recommended some time ago in this affection. I have not found anything better than a strong solution of nitrate of silver, sixty to one hundred and twenty grains to the ounce, applied with a brush to the inflamed glands; and, if the remedy is resorted to early in the disease, the symptoms almost invariably subside within a few hours. If, however, the inflammation has lasted for a day or two, the silver-solution will not abort the attack, but it will in most instances prevent suppuration. It is curious to observe with what regularity in some persons the tonsillitis recurs during the winter months, and I have seen a number of cases in which a tonsillitis occurred regularly every six weeks. In these instances it is best to remove the glands, which are always more or less hypertrophied after an attack has passed off, either with the tonsillotome or, if the gland be too small to be grasped by the annular knife of the instrument, by a few incisions with the galvano-cautery knife.

It is a gratifying result of the investigations of earnest workers in laryngology that very little is nowadays said or written about pharyngitis in its various phases.

This affection but a few years ago was looked upon by the practitioner as the ready explanation of almost all throat troubles, and was accordingly treated vigorously with probang and brush; while now it is known to be in most instances merely a symptom either of nasal catarrh or of gastric irritation, and will disappear with the removal of the cause without any direct local treatment.

In conclusion, I will briefly relate a case which illustrates the above remarks in a striking manner. A young lady came to me to be treated for a constant dryness and tickling in the throat, which had lasted for several years and had resisted the vigorous treatment with the whole list of astringents applied to the pharyngeal wall. An examination revealed the pharynx to be studded with enlarged follicles, which were red and irritated. The larynx was normal; but in the naso-pharyngeal cavity I discovered two very large posterior hypertrophies, springing from the posterior ends of the middle turbinated bone on either side. These I removed in succession with the wire-snare at an interval of a week, and two weeks after the second hypertrophy had been removed the pharynx appeared normal, and all symptoms of the former trouble had disappeared. No applications of any kind had been made during the time of treatment.

1346 SPRUCE STREET.

NOTES OF HOSPITAL PRACTICE.

CLINIC OF LOUIS A. DUHRING, M.D., PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by HENRY WILE, M.D.

THREE CASES OF SCABIES.

THREE boys of the same family, aged respectively 10, 8, and 6 years, exhibit, in various degrees of intensity, a marked eruption, especially on the hands, arms, neck, abdomen, genitals, and buttocks. The duration of the disease has been from eight to ten weeks, and the eminent characteristic of the lesions is their multiformity. They consist of points, papules, vesico-papules, and here and there a pustule. In addition to these are excoriations, and crusts. In this disease lesions soon occupy very nearly the whole surface of the body, with a predilection for certain regions as the interdigital spaces, the

flexor surfaces of the arms, the penis of the male, the breasts of the female, and the buttocks. Their multiformity and distribution give the key to the diagnosis, and we have here three cases of scabies, or itch. Itching is a constant symptom, being especially annoying at night when the patient is in bed. The disease is eminently contagious, and is produced by the presence of the itch mite, called *sarcoptes scabiei*, an animal parasite. It moves between the layers of the epidermis and in the rete Malpighii, feeding upon the juices of the skin, and as it moves along it lays its eggs, and after a short time the characteristic burrow is produced. In these cases we have any number of such well-marked burrows. They vary from a line to a quarter-inch in length, being often discolored by foreign matter gaining entrance or being rubbed in, and at the end of the burrow is a point representing the seat of the mite. Scabies is comparatively rare in Philadelphia, but is more common in seaport towns. The treatment is at once simple and satisfactory, consisting in the use of some parasiticide, and among the best are the sulphur preparations. Here we will direct the following:

R Sulphur. præcipitat.,
Balsam. Peruviani, aa ʒi;
Adipis, ʒi.

M. Ft. ungt.

Sig.—To be well rubbed into the entire surface of the body twice daily.

ALOPECIA AREATA.

A married woman, 33 years of age, presents on the scalp an anomalous condition in various stages of development. About two years ago, according to the statement of the patient, twenty-two bald patches suddenly made their appearance, which is evidence that the disease came on insidiously and had existed some time before it was recognized. At present there are smooth, entirely bald patches, varying in size from a dime to a silver dollar, scattered over the scalp, also some patches covered with a growth of fine whitish silky lanugo, with here and there a scant amount of short black hair, which is all that remains of the original growth. The affection as it here exists is disfiguring, but it is already on the road to recovery, and in several months or a year the hairs will probably all return in their full vigor.

In some cases, however, the disease may continue five, ten, or twenty years, going through various changes, full recovery never taking place. As regards the prognosis, the older the patient the less favorable it is, and the younger the person the more favorable. It very seldom happens that the hair does not return in young persons. The prognosis should, however, always be guarded. It is a disease of the hairy system, affecting not only that of the scalp, but also that of the eyebrows and eyelashes and other parts of the body. It is produced by faulty nutrition and insufficient nerve-force. Some authorities assert that it is of parasitic origin; but the microscope shows no specific fungus. It belongs to the same class of diseases as vitiligo (in which there is an abnormality regarding the deposit of pigment), and often follows mental strain or shock. Internal treatment alone is followed by beneficial results, and arsenic is the agent that cures the majority of cases. It is the only remedy that seems to have a positive effect. Local stimulating applications have no great value,—at least until the hair begins to grow again. The arsenic may be given in the form of arsenious acid, one-fortieth to one-thirtieth of a grain at a dose, using small rather than large doses. Where the hairs are beginning to grow, we may use some stimulating local measures; and in the present case an ointment composed of equal parts of tar and cosmoline will be ordered.

SYPHILODERMA TUBERCULOSUM (OF THE SOLE OF THE FOOT).

A woman, 70 years of age, has a disease affecting the sole of her left foot, and it first appeared about two months ago. At present there is in the centre of the sole of the foot an irregular, palm-sized lesion, consisting of variously sized ulcers, about one-quarter of an inch deep, the surface secreting a yellowish, puriform fluid, and very painful to the touch. Outside of this large lesion are several smaller ulcers scattered about. The whole is somewhat concentric, and possesses all the characteristics of a late tubercular syphiloderm.

These lesions affecting the soles of the feet are difficult to treat, on account of the position. In the first place, the patient will be ordered to bathe the foot in hot water until all the horny epidermis comes

away; then the following ointment will be applied:

R Hydrargyri ammoniati, ʒss;

Adipis, ʒiv;

Cerat. res. co., ʒiv.—M.

Ft. ungt.

Sig.—Apply on small pieces of cloth.

Internally the iodide of potassium will be administered in ten-grain doses three times daily.

HERPES ZOSTER.

A man, about 45 years of age, has a typical acute eruption occupying one-half the body, extending in the shape of a band three inches wide from the spinal column to the umbilicus. The eruption is characterized by groups of vesicles, some smaller, some larger, the average being about the size of a split-pea. Some of the lesions are round, others elongated; some are discrete, while others have coalesced, forming small blebs. The primary lesion is a vesicle surrounded by an inflammatory areola. The color is a pinkish, reddish, bluish tint, and not a bright red.

We have here a typical case of herpes zoster, commonly known as "shingles." It cannot be confounded with any other disease. The eruption of the vesicles is usually preceded by pain or uneasiness in the part, and where there is a persistent unilateral pain this disease may be suspected. The pain varies and is often slight. The eruption is herpetic, in that there are vesicles and that they are grouped. There is no herpes without grouping of the lesions. The eruption is now at its height, and the lesions are already becoming flattened. The contents may be serous, bloody, or pustular, and in severe cases the lesions may leave scars, especially when occurring about the orbit; it may then be accompanied by loss of the eye. The disease may attack any part of the body, but it always occurs in the line of the nerves, and especially along the track of the dorso-abdominalis or dorso-pectoralis. It is generally unilateral, only in very rare cases are both sides of the body affected. As a rule, it attacks an individual once in a lifetime. It runs an acute course in from two to four weeks ordinarily, passing off spontaneously.

The disease is due to an inflammation of the nerves, either the terminal endings or the trunks being affected. The course

of the disease is little influenced by treatment. In some cases the phosphide of zinc, given in pill form, one-fourth to one-tenth of a grain repeated every two or three hours, is of benefit. The best form of treatment, and that which affords the most relief, is with the galvanic current, the negative being passed over the lesions. Locally, powders of lycopodium and starch may be used; but among the best applications are lotions of the fluid extract of *grindelia robusta*, one drachm to the ounce or two of water, or the compound sulphide of zinc lotion, composed as follows:

R Zinci sulphatis,
Potass. sulphuret., āā ʒi;
Glycerin, fʒi;
Aquæ fʒiv.—M.

Sig.—Apply three or four times a day.

A lotion of sulphate of zinc, about five grains to the ounce, may also be used.

ECZEMA PUSTULOSUM.

A boy, 5 years old, of a blond complexion, presents an eruption occupying the entire scalp. It is characterized by bright-yellow, sulphur-colored crusts and the presence here and there of bald patches. The disease has existed six months, and is a typical example of pustular eczema. Occurring on the head and where there is so much crusting as here, it is liable to be confounded with *tinea favosa*, yet the points of differential diagnosis are many and plain. In the first place, the crusts are peculiar to eczema, and bear no resemblance to the characteristic cup-shaped crusts of *favus*; then the bald patches are covered with abundant young hairs and contain no broken-off hairs; then, again, there is an absence of the peculiar mousey odor of *favus*. Besides this, the disease is extending down the sides of the face and on the backs of the ears, and also involves the eyelids.

There is no reason why this disease should prove obstinate, as it is usually amenable to proper treatment, and a cure may be effected in from four to eight weeks. The treatment will first consist of local applications of olive-oil allowed to remain on over-night, and in the morning washed off with hot water and soap. By this means the adherent crusts are readily and effectually removed. After the crusts are completely removed, an ointment of ammoniated mercury, twenty grains to the

ounce of lard, will be applied twice a day, fifteen minutes at a time. Internally, cod-liver oil will be ordered. When we see our patient next week, there will without doubt be a change for the better.

TRANSLATIONS.

SEPTIC PNEUMONIA IN INFANTS.—Dr. Oscar Silbermann draws the following conclusions from an analysis of twelve cases of septic pneumonia occurring in infants:

1. The septic pneumonia of the newborn and infants always originates with a tracheo-bronchitis, and is to be regarded as a catarrhal pneumonia, in many cases due to the presence of a foreign body.

2. It may be produced by inhalation of decomposed amniotic fluid or genital secretions, or through inhalation of infected air in cases of septic infection of the mother.

3. The septic pneumonia of the newborn frequently originates with disease of the pleura, but seldom with disease of other organs, in contradistinction to other septic processes in infants, which are usually associated with multiple points of origin.

4. The alveoli and bronchi of children dying from septic pneumonia are always filled with masses of bacteria.

5. The blood in cases of septic pneumonia in infants shows a great increase in the white corpuscles, with breaking down and solution of the red blood-disks.

6. Jaundice is a constant accompaniment of this disease.

7. The disease usually originates from one to two days after delivery.

8. The disease is always fatal, usually on the third or fourth day after birth.

9. The access of septic material to the lungs in the new-born is favored by insufficient closure of the glottis, and by the shortness of the main bronchi.

10. The wide distribution of the septic process in the lungs is due to active epithelial desquamation and the narrowness of the finest bronchi, as well as the feeble muscular apparatus of the respiratory organs of the new-born child.—*Deutsches Arch. f. Klin. Med.*, December 12, 1883. s.

ENTERITIS IN HEREDITARY SYPHILIS.—Mracek describes the anatomical alteration of the intestine which he observed in six

cases of hereditary syphilis in infants. Such anatomical changes may be either diffuse, when the inflammatory process involves the entire intestine or extends over a large portion of it, or circumscribed, as in other typical syphilitic affections: in the latter case the upper portion of the jejunum is especially affected. Two forms may be differentiated,—one of infiltration confined to the intestinal patches, the other of irregular tubercles situated in the sub-mucosa, and of about the size of a pea. Both forms are liable to ulceration, which may be distinguished from other forms of intestinal ulceration by the fatty character of their bases and their indurated, punched-out edges. Microscopic examination shows that the process starts as a round-cellular infiltration in the walls of the finest arterial vessels, obstructing their calibre and resulting in an anæmic necrosis. In the diffuse variety the inflammatory process is principally located in the mucous membrane, and leads to fatty degeneration and desquamation of the epithelium.

This affection may explain why children of syphilitic mothers so frequently suffer from severe uncontrollable intestinal catarrh.—*Centralb. f. d. Med. Wissen.*, December 13, 1883. S.

THE SITE OF THE CARDIAC IMPULSE.—Dr. S. Eulan makes the following statements as to the relation existing between the position of the heart's impulse and the line of the nipple.

In the recumbent position the impulse of the normal heart never extends over that portion of the fifth intercostal space lying between the clavicular and parasternal lines.

If, instead of being within, the heart-shock lies without the left clavicular line on the level of the fifth intercostal space, the heart has either been displaced or abnormally enlarged.

In cases where the cardiac impulse is felt in the fourth intercostal space, especially in children and females, a moderate extension of the impulse over the clavicular line must not necessarily be attributed to pathological processes unless some other signs of disease are present.—*Deutsches Arch. f. Klin. Med.*, December 12, 1883. S.

TEST FOR IMPURITY OF IODOFORM.—The examination of iodoform for impurities is conducted, according to the method of

Agema, as follows. Iodoform is shaken with distilled water, and the solution filtered, and to it is added an alcoholic solution of silver nitrate (lunar caustic). The mixture is now set aside for twenty-four hours. Should foreign substances be present in the water, there will be a black precipitate of reduced silver in proportion with the amount of the impurity. Pure iodoform will give by this test only a faint grayish cloud upon the bottom of the glass. All the preparations which had caused toxic symptoms gave a precipitate when tested by this method.—*Centralblatt für Chirurgie*, No. 48, p. 770.

THE RELATIONSHIP OF MALIGNANT DISEASE TO THE FOOD AND ITS TREATMENT BY DIET.—In a communication to the Académie de Médecine de Bruxelles, M. Van den Corput made a suggestive reference to the etiology of cancer (*Revue de Thérapeutique Med.-Chir.*, January 15). Upon considering the geographical distribution of cancer the author found that it is almost unknown in hot countries, and also among certain religious communities in other latitudes which abstain from the use of meat. The only apparent connection between these two classes is the diet. It is apparently, therefore, to an exaggerated animal diet—which at the same time causes an excess of chloride of sodium in the system—that we must look for the principal pathogenetic cause in the cancerous diathesis. This must reside in an infection of the organism, either by certain nitrogenized products susceptible of disturbing or changing the normal nutrition processes, or by certain inorganic elements, such as the phosphates, capable of favoring the histogenesis of neoplasms. A confirmation of this view was found in the rapid emaciation of the patients, accompanied by the decreased discharge of urates in the urine. The application of these views to the treatment of cancer is obvious, but it does not appear that the author has succeeded as yet in demonstrating the correctness of his views by clinical investigation.

SYPHILIS IN THE MONKEY.—M. Martineau reported to the Société Médicale des Hôpitaux that the monkey which he had inoculated with syphilis several months ago has now a syphilitic inflammation of the vault of the palate.—*Le Progrès Médical*, October 20.

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EDITORIAL.

THE TREATMENT OF SPINAL CARIES AND ABSCESS.

AMONG the latest achievements of the antiseptic method, which in the fields of abdominal and joint disease has revolutionized modern surgery, may be mentioned the treatment of spinal caries by early evacuation of the pus-cavity and the removal of any carious portion of the vertebral bodies that may be found. The usual methods of expectancy, either by complete rest in the recumbent posture, or by the immovable dressings, do not always prevent abscess nor greatly improve the prognosis when the purulent collection points in the psoas region or elsewhere.

"The treatment of spinal abscess," says Prof. Gross, "is altogether unsatisfactory. Generally several months elapse before the true nature of the disease is ascertained, and then its ravages will usually be found to be of such a character as to render all efforts at a cure utterly hopeless." He also states that "if a free dependent outlet could be formed for the matter early in the disease, the probability is that the patient might occasionally get well."*

Mr. Frederick Treves, the author of the section of Malformations and Diseases of the Spine in the International Encyclopædia of Surgery, of Dr. Ashhurst,† in that place insists upon the occurrence of suppuration in every case of Pott's disease, even where recovery takes place without evident abscess, and recommends early evacuation with the aspirator, or, if the overlying integument be quite thin

where the abscess points, to make a free incision with antiseptic precautions, and also that the wound shall be dressed antiseptically as long as may be necessary.

In a report recently read by Mr. Treves before the Royal Medical and Chirurgical Society of London, he described a method devised and practised by him for removing fragments of bone and evacuation of the purulent collection. In the proposed operation (as we learn from the *Medical Press*) a vertical incision is first made near the outer edge of the erector spinæ muscle, and the sheath of this and of the quadratus lumborum next cut through. The vertebræ are then reached by incising the psoas and following the structures on to the surface of the bone. Ready examination of the vertebræ is thus rendered possible; and should sequestra exist, their removal is rendered perfectly easy. In the first case, operated upon by Mr. Treves in this manner, the necrosed portion of bone was readily removed, and the patient did very well after the operation. The same result, as far as the operation went, was reported of two other cases; but one of them, a boy, subsequently succumbed to pre-existent disease of the lung and other complications.

Mr. Treves points out that the gravity of caries of the vertebræ depends principally on the depth and inaccessibility of the morbid action and not upon any peculiar pathological features which it possesses. Mr. Bryant, in the discussion, spoke favorably of the operation mainly because it would afford an easy outlet for the pus, rather than on account of the opportunity of removal of the diseased bone, which does not always exist. Mr. Savory, however, questioned the applicability of the operation, since it gives a very inadequate exposure of the parts affected for the removal of bone, and where sequestra do not exist, the operation of a purely exploratory character is not justifiable. Mr. Barwell also called attention to

* System of Surgery, Sixth Edition, Phila., 1882, vol. ii., p. 122.

† The International Encyclopædia of Surgery, vol. iv. New York, 1884.

the fact that removal of a large amount of diseased bone would not be feasible, and the diagnosis would always be a doubtful one as to whether any sequestra really were present.

It is hoped that Mr. Treves's communication will direct professional attention anew to the treatment of a class of cases that too long has been an opprobrium to medicine.

THE AMERICAN ANTI-VIVISECTION ASSOCIATION.

THE first anniversary of the American Anti-Vivisection Association, held in this city on the 30th of January, calls for some comment by the medical press. The work during the past year has been principally directed towards enlisting professional and public sympathy in its work, and distributing pamphlets defending the object of the organization, which is to secure the regulation of vivisection by law. The question, as it now stands, would be simplified and very much aided towards a satisfactory solution, if each party to the controversy with regard to the practice of vivisection could be made to better understand the position of the other.

In the first place, it may be said in behalf of American vivisectors, taken as a whole, that they repudiate the definition of a vivisector given by M. de Cyon; they do not regard the sufferings of animals with pleasure or even with indifference; they deplore the necessity of inflicting pain or sacrificing life, but regard the ends of science as of sufficient importance to humanity to justify the course they pursue. This, at least, appears to be the opinion expressed by the author of a recent work which has been everywhere received with high encomiums as a fair, logical, and temperate defence of vivisection;* it also is the feeling which has been expressed by prominent physiologists

who are now engaged in original research. No exception can be taken to the statement that all vivisection experiments that are not distinctly scientific in their object are unnecessary, and therefore cruel; and being cruel, should be condemned by every right-minded man or woman. The experiments of Brachet, who tortured a pet dog to death to test the limits of his affection, and the atrocious performances of Mantegazza, who invented ingenious methods of causing extreme physical agony to living animals, are not considered defensible by physiologists generally; and many members of the medical profession, although in favor of original research, are also decidedly opposed to the use of animals in the lecture-room to illustrate well-known surgical or physiological facts.

On the other hand, it is claimed in behalf of the Association that its object is not the abolition of vivisection entirely, but its restriction within proper limits. The names of the incorporators and managers of the American Anti-Vivisection Association sufficiently vouch for the propriety of the objects sought to be attained by the organization, and for the intelligent and fair consideration which will be given to the subject. Dr. Thomas G. Morton, of this city, is the president of the society for the current year.

If a disposition could be manifested by those engaged in vivisection to concede a little in return for greater security in carrying on necessary experiments, and they could be persuaded to formulate the conditions demanded by science, it is possible that a law might be framed in this State that not only would be satisfactory to those who are opposed to unnecessary vivisection, but which would also react to the benefit of science by increasing the value of the work done, and so establish beyond question the value of properly-conducted scientific investigation in experimental therapeutics and in physiology.

* *Physiological Cruelty*. By Philanthropos. New York, 1883.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE medical events of the present time are the honors conferred upon members of the profession. Ireland had to be satisfied with the knighthood of a surgeon; though not long ago Dublin could boast several medical baronets. England has been more fortunate. First came Andrew Clark, senior physician to the London Hospital, the medical adviser of the Premier and of a large proportion of the titled folks in Great Britain. Steadily, by careful pains and clinical acumen, Dr. Clark worked his way upwards at the London Hospital and among society. It is said he so impressed Mrs. Gladstone by the manner in which he discharged his duties at an institution with which she was connected that she induced her spouse to place himself in his hands, with results most satisfactory to all concerned. Sir Andrew Clark, Bart., like most of the leading consultants of the immediate present, has contributed little to medical literature; but that little has always been sound and valuable. He drew attention to "Fibroid Phthisis," and caused the profession generally to realize that there were other forms of lung-consolidation than the truly tuberculous form. He has also kept the subject of "Renal Inadequacy" well before the profession. Dr. Clark's observations are always worthy of close attention; and his manner is impressive, his speech brief, to the point, and epigrammatic. Though not a prolific writer, it must not be supposed that his contributions to medical literature are confined to the two subjects mentioned above. One great matter Dr. Clark has done which ought to earn for him the gratitude of the affluent, and that is, he has always pointed out clearly, unswervingly, and incessantly the evil consequences of a dietary too rich in albuminoids, especially when accompanied by alcoholic indulgence. He is neither a teetotaller nor a vegetarian; yet he may be called "the apostle of temperance" in matters of eating and drinking. Whether all who ought to be grateful to him are sufficiently thankful it is not in my power to affirm. The next is the veteran oculist, William Bowman. Middle-aged men remember the ponderous, but valuable as it was weighty, "Cyclopædia of Anatomy and Physiology" edited by Todd and Bowman, issued in parts, and containing in pretty full detail the best and most recent information on many and varied subjects,—a work of the very highest character. He was then Professor of Physiology and Anatomy at King's College. In 1842 he gained the Royal Medal of the Royal Society, and has been made a corresponding member of numerous foreign scientific socie-

ties. There is no more revered name in the ranks of medicine than that of Sir William Bowman, Bart. Even better known to the world, especially the world of surgery, than either of the above, is the name of Joseph Lister, "the apostle of the antiseptic treatment of wounds." His earlier contributions to the subject first attracted public attention when the late Prof. Sir James Simpson, Bart., and the late Prof. James Syme were worrying each other in their incessant warfare in Edinburgh, when the great obstetrician was advocating acupressure for the arrest of arterial bleeding,—an antiseptic measure in its way. Those who remember that time know how wonderful it was held to secure union by the first intention; how the French surgeons never attempted anything of the kind, but stuffed charpie into the green surgical wounds right away; and German surgery was about the same. Steadily, sturdily, unfalteringly, Lister propagated his views, and slowly, often unwillingly, converts announced their acceptance of his views, or at least his practice. At last French and German surgeons awoke to the teaching of the new faith, to the inestimable benefit of their patients. Even those who still contend against the germ theory have accepted the practice of the most scrupulous care and cleanliness in the infliction of surgical wounds, and in the dressing of the said wounds, with the most gratifying results. Sir Joseph Lister, Bart., has also received the gold medal of the Royal Society, and been elected a corresponding member of a legion of foreign societies, with other honors. He has earned for himself an honored and undying name in the annals of medicine. If the medical profession is honored by baronetcies being conferred upon these three gentlemen, the baronets of Great Britain may be congratulated on these accessions to their ranks. Still there is no medical peer. A curious instance of the survival of prejudice! Yet in these days of sanitation, of preventive medicine, of attention to the public health, one might imagine that a medical peer might not be quite out of place among our hereditary legislators. But his time may yet come. The showers of honors which have fallen right and left lately make mere knighthood a mark of disdain, or the indication of the want of means to sustain the honor of an hereditary title. Whatever the government, or our august lady the Queen, mean by this profuse distribution of handles to names, is unknown to the writer, and therefore he cannot instruct his readers.

Another medical event is the sudden appearance of a new medical publishing firm. Some little time ago an announcement appeared that the popular publishers Messrs. Cassell & Co. intended to issue a series of manuals for students of medicine. Instead of dealing with medical authors *seriatim*, they agreed with Malcolm Morris, known to the

profession as the author of a treatise on the "Diseases of the Skin," rather of a practical than of a comprehensive character. Morris is what very few men in the profession are,—viz, a really good business-man, and thoroughly fitted for his position; a right good-hearted fellow, too, who would live and let live. Through him a series of manuals have been arranged for, which will be of service to their writers as well as their readers. The first was "Elements of Histology," by Klein, which at once took its position, and asphyxiated Quain and Sharpey's massive work, indispensable before on account of its chapter on histology. Then followed "Surgical Pathology," by A. J. Pepper, of St. Mary's Hospital,—a work whose *raison d'être* has been demonstrated by its sale. Instead of massive, comprehensive works, separate manuals are provided, each dealing with its own subject-matter proper. For instance, "Human Physiology," by Henry Power, will be a work at once in immediate demand. Of course, human nature would not be what it is if Malcolm Morris was regarded as a benefactor by those authors whose works are threatened with extinction by these new books. But the rising generation of medical men will hold his name in respect.

Medical works other than students' manuals will probably issue before long from this last accession to the scanty ranks of medical publishers. The first medical publisher was Churchill, who for long had the field practically to himself; but first one and then several more publishers began to think the pickings of medical books were worth having. Whether the new recruit will go the length of essaying a medical journal or not is a matter on which opinions are divided. It is not unlikely that such an attempt will be made, though the field seems pretty well occupied by existing journals. With you a medical journal springs up somewhere in a night, and, instead of disappearing again as swiftly, holds on its way and survives. It is far different with us. There is little or no local *esprit*. The metropolis overshadows the provincial towns here; and though Birmingham has a puny medical journal, Liverpool a medico-surgical journal, and Bristol a journal, these local efforts only maintain a struggle for existence by comparison with journals of like character ayont the Atlantic. From this it is not to be inferred that the only journalistic power in the medical profession is to be found in London; only its amount there overshadows the rest of the land. The *Midland Medical Miscellany* covers an area which can well carry a medical journal of its own. As to medical literature, the tendency is more and more to reissue American works here, which seem to be largely taking the place of the works on special subjects which used to appear. A work on Practice of Physic, by the late Dr. Hilton Fagge, was

announced, but whether it will be published after his untimely death or not is not yet apparent. There could have been little novelty in it, as a matter of course. A work on Obstetrics, by Robert Barnes and his son Fancourt, is announced to appear shortly. Otherwise the advertisements tell of familiar works, well known. "The Physiological Factor in Diagnosis," by the writer, has reached a second edition already, which tells that it fills a niche hitherto unoccupied.

The new year, however, commences with what promises to be very useful, especially to the large bulk of the profession, the men who toil for scanty rewards in the humbler quarters of our towns and many rural communities. Perhaps some others, too, of higher social grade may avail themselves thereof. The increasing income of the British Medical Association is enabling it to do many things, such as granting sums for scientific research, giving medals to deserving members of the profession, or helping a medical man oppressed by a vexatious appeal to the law by which sundry malevolent persons may practically subject him to a heavy fine. Now the proposition is made of "a medical sickness, annuity, and life-assurance society." In your country an average man, with pains and moderate thrift, can lay aside some surplus income to educate his children and keep himself when his days of capacity to labor are past. Here, unfortunately, it is not by any means always possible for a medical man to do this. Over large areas the working expenses swallow up the earnings, leaving barely enough to keep up appearances. For years this goes on; and, unless the medical man has a son who can step into the practice as his father falls out, the day comes at last when the daily bread runs short. The proposition is to institute such an insurance society on the basis of the British Medical Association, which could provide the funds, be security, and put any surplusage into the pockets of the members, instead of those of the shareholders in insurance companies. The design seems an excellent one, and deserving of all support that can be given to it. It is proposed that sums of from two to four guineas weekly during sickness be arranged for; and that these may be conjoined to certain yearly allowances payable on the insurers reaching sixty-five years, and continuing till death; also that sums at death may be secured, as is common now. It is suggested at present that the age of forty-nine next birthday should not be the ultimate limit for would-be insurers, though it might be well to fix this limit for the working of the scheme when once fairly a-going. It will thrive, doubtless, if well arranged and supervised by competent persons; and both conditions are surely feasible. It is to be hoped that there is no member of the profession so poor a bread-winner, so handicapped with a fam-

ily, or so thriftless that he cannot manage to insure in this proposed arrangement. It will be a very bad day for the public, and no gala-day for the profession itself, when the last struggling poor man takes his diploma and enters upon the field of practice. But the large percentage of poor men, poor in other senses than the mere need of money, who have entered the ranks of medicine in the past has done injury to the profession in that in the struggle for existence they may have stooped to much that is undesirable. It is not merely that such men choose to take up a lowly social status themselves, but they submit to what is very undesirable for the profession at large, and educate the laity to take like liberties with other and better men. It is sad to listen to the just complaints of a respectable medical man with one of these "brothers" on his flank. When all other measures fail, the second fiddle reduces his fees and awaits the result. To a large number of social units a "Dr." is a doctor, just as a grocer is a grocer; the wares of one and the worth of the other are identical; and, of course, they purchase the cheaper article. After pursuing a career of this grovelling kind until years have brought it to an end, this medical man is ready to accept the charity of the benevolent, and gets some measure of it. Of course, how far loyalty to his profession has been a factor in the calculations of this unit of the profession, and self-denial another, are matters upon which opinions might differ. But, without being uncharitable or ill-natured, one may suspect that he has looked little beyond his own self-interest, and has not been particularly clear-sighted about that. He has made himself out to be quite on an equality with his professional brethren not by rising to their height, but by striving to drag them down to his own status, by backbiting and defamation, by pointing out their mistakes, and other like means of doing them injury. He is not now so commonly found as he was, this noxious creeper, but he is yet to be seen in the hedge-rows oftener than is good or beneficial. His extinction is threatened by the increasing severity of the examinations, which terrify him dreadfully, and soon he will be largely non-existent. It is not his monetary poverty which renders him so objectionable; it is merely that his want of coin throws up his qualities in stronger relief. If he were not pinched, perhaps he would avoid some of the paths he treads. But in poverty he stoops to almost anything which will put a shilling into his pocket, and then clamors to be respected and treated courteously as an honorable member of a learned profession. No wonder his claim is not always admitted.

Now that this section of the medical profession is diminishing, there will be a fairer prospect for other men in the humbler ranks of the profession, and it is to be hoped that this new departure by the British Medical

Association will be welcomed by what may be termed the rank and file of the profession. If so, it will most certainly be to the advantage of all. If a man can so be helped to make some provision for himself, instead of drifting on to the inevitable end in hopeless lethargy, it will be a work of brotherly kindness; while a great many men, willing but scarcely able to see how to help themselves, will find this movement give them a friendly boost. Not that poverty is a vice, or even a crime; but it throws up character in its strength, and, what is worse, its weakness. Consequently, if an element of thrift can be lent to those who are of themselves unequal to thrift, it is a boon to them. Placed on a basis of mutual brotherhood, such a scheme is more attractive than the prospectus of a new company, about which all men with a modicum of prudence would have their suspicions. It will be necessary for the financial success of the new move that it be in turn prudent about the selection or accurate appraisal of lives. Nor would the post of medical adviser to the insurance company seem to be highly attractive. It would be a most invidious post for an individual, and the danger of acting harshly towards a medical brother to whom insurance may be of the first moment, is one which most persons would like to avoid, and yet by such kind-heartedness may do detriment to a most deserving movement. The class of men to whom such a scheme is full of promise is just that where a large number of doubtful lives are to be found. Much poverty is the result of undue indulgence in alcohol,—undue in the sense of being beyond what is good for the individual either in person or in purse,—and yet the vice is capable of much careful concealment. Such lives are notoriously "bad from an insurance point of view," being liable to be cut short by intercurrent disease which a healthy organism could readily throw off. How to protect the new venture against this class of life will exercise the ingenuity of those who are at the helm. As to the bulk of the profession, it will be a distinct advantage. For there are extremes; and while at one end we find medical baronets, at the other we find men who can hardly scrape together a bare living; and provision for the one extreme is as desirable as conspicuous honors are for the other. All success, then, to the new "friendly society" aspect of the British Medical Association!

J. MILNER FOTHERGILL.

CHICAGO.

IN consequence of our Board of County Commissioners forbidding the delivery of unclaimed pauper dead to the medical schools, a general raid has been made upon the graveyards of small towns in the State, for dissecting-material to meet the demands

of this city; and not a little trouble has been experienced by many of the colleges to keep their tables meagrely supplied. Occasionally the friends of deceased persons come to the city, and, by process of law and otherwise, investigate the dissecting-rooms in quest of missing bodies, not always unsuccessfully. At such times there is a good deal of popular excitement, and our Board of County Commissioners are roundly abused, and justly so. It appears there is some religious influence holding the Commissioners to their present course, as a large majority of our pauper dead come from one denomination.

A somewhat peculiar and interesting bit of history has been developed in connection with the life of a monstrosity. About thirty years ago a respectable couple had born to them, in this city, a boy without arms. To one shoulder was attached a portion of a hand or flipper having three ill-formed fingers at its extremity; the other shoulder had a rounded protuberance only, bearing no indication of amputation in utero. The child was well formed in every other particular, and grew to be a bright, intelligent, and successful business-man. He wrote an exceptionally neat and rapid hand, the movements of the pen being aided by his mouth. About two years ago he married a young lady of good family, and last autumn he died of pneumonia. At the time of his death his wife was far advanced in pregnancy, and lately gave birth to a boy having the same deformity as the father, with this slight difference, that there are in this case no rudimentary fingers. It may be stated in this connection that the parents manifested much anxiety regarding their expected offspring.

As an illustration of the working of our lunacy laws, I will relate a case that came into court a few days ago. A lady of 60 years was charged with insanity, and the expert, medical, and lay evidence clearly went to show the patient (prisoner) to be of unsound mind,—that during the past two years her character, habits, etc., had undergone a complete change, and that her acts and faculties showed pretty clearly that she was suffering from the early stage of senile dementia. The jury brought in a verdict of insanity, whereupon the counsel for the defence took the extraordinary step of having the jury polled, and demanded a new trial; and, strange to say, the judge set the verdict aside and surrendered the prisoner to the custody of her lawyer till such time as he, the judge, might decide upon another trial. The defendant in this case is wealthy and has full control of considerable means. It is not, however, a case where the least wrong can be attached to the motives of the relatives.

Our Home for the Friendless has long been receiving foundlings, and amongst this class of inmates the mortality has been frightful, but one infant under three months having

survived more than three months after admission. This has been true not of one but of several years past. In view of this state of things, it has been advised that children under one year shall not be admitted. M.

January 18, 1884.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held January 17, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

ANTISEPTIC DRESSINGS AS THEY ARE USED IN THE NEW YORK HOSPITAL. A DEMONSTRATION,

was the title of a paper read by R. F. WEIR, M.D.

The matter he was about to present, he said, might be of little interest to the hospital-surgeon; it was more especially intended for the benefit of the general practitioner. There are some differences in the details of antiseptic dressings as now used and formerly, but they still involve the same principles originally set forth by Sir Joseph Lister. The object sought for in the treatment of wounds is to place them in a condition to permit of the best drainage, to keep them at rest without frequent renewals of the dressings; and in order to do this it is necessary to resort to chemical substances which will prevent putrefaction. He did not wish to enter upon the theoretical part of the subject, but one could not help thinking that the development of micro-organisms was associated with decomposition either as a cause or an immediate concomitant effect. The researches of Lister had shown that the healthy tissues had to a considerable degree the power of resisting the development of germs, notwithstanding the fact they found entrance into the air-passages and alimentary tract. When the tissues became abnormal a better soil was prepared for the development of micro-organisms. The object of antiseptic dressings was to neutralize the development or effect of disease-germs, and, until recently, this was commonly done by the use of carbolic acid or iodoform. Carbolic acid, however, was volatile, and unless used fresh could not be depended upon. Again, carbolic acid and iodoform were both liable to produce toxic effects. Since a year ago, in March, he had been using corrosive sublimate. He was led to bring it before his audience to-night from having witnessed its extensive use abroad during the past summer, where it had produced excellent results. It was applied to wounds in several different ways,—in the form of gauze, cheese-cloth, or mull, impregnated with the salt and applied to the wound. The absorbing power of the

gauze was increased by boiling in a weak solution of soda or muriatic acid, but more recently they had obtained it prepared directly from the manufacturers. To avoid too frequent and early changes of the dressing, substances of greater absorbent powers were applied, such as peat. Formerly the white was used in Germany, but now the black mixed therewith was preferred, as it was supposed to possess in itself antiseptic properties. Dr. Weir did not think it possessed much advantage over the white. Neuber left it on in some cases forty-two days without a change of dressing. This great length of time, however, was not necessary, as the tendency to septic absorption passed away in ten to fifteen days. One objection to it and to other absorbent dressings was that they were too bulky, and were in the way of the application of splints in compound fractures, when a more frequent inspection should be made. Jute, formerly carbolized, but at present used with the corrosive solution, was an excellent absorbent dressing, particularly the finer quality now to be obtained of the importer. The pulp of wood, ready to be made into paper, was also an excellent dressing for wounds, and was capable of absorbing thirteen times its weight in water. The absorbent power of jute was from four to six, and of peat nine to ten, times their weight of water. An excellent cheap dressing, which could be obtained anywhere in our own country, was common wood-moss. It was necessary to bake it and destroy the germs which it contained before using it. It would take up four times its weight of water. These substances were easily prepared with the corrosive solution. The jute and moss were dipped in a solution of one part to a thousand, fifty parts of glycerin being added. The next day they were wrung out and allowed to dry. The gauze and cotton-batting were prepared as follows: Corrosive sublimate, twenty parts; water, four thousand four hundred and eighty; glycerin, five hundred. The specimens should be freshly made, for the corrosive sublimate was disposed to change into calomel. Most of the time during the operation a solution of the bichloride, one part to a thousand, sometimes to two thousand, was allowed to trickle over the wound. The bedding and other parts of the body were protected by passing the injured limb through a hole in a rubber blanket. The catgut ligatures were prepared by a ten minutes' bath in a one to one hundred solution of the bichloride, and afterwards for ten to fifteen hours in a solution of one to one thousand, and kept in absolute alcohol. Sometimes they were prepared after Kocher's method, put into oil of juniper, and afterwards into absolute alcohol. Dr. Weir had seen no poisonous effects from the bichloride, but the possibility of this might be guarded against by using the boro-salicylic solution.

The wound was preferably closed with catgut, the continued suture being employed. Sufficient space was left for a drainage-tube. The decalcified bone tube was used. They were specially serviceable in amputations, etc., where it was necessary to get primary union, as they became absorbed in five or six days. Having cleansed the wound carefully with the running solution, several sponges should be placed over it to carefully compress it. Replace them by sublimate-gauze, with which make pressure, then apply more of the handkerchiefs. Secure them by sublimate-gauze bandage, then apply the absorbent dressing of peat, or other substance, done up in bags of suitable shape and thickness. Some smaller ones may be added, bound firmly in position by crinoline bandage dipped in the antiseptic solution. The impermeable outer covering of Lister was not employed. The dressings were not changed until signs of something going wrongly manifested themselves. A persistent temperature for twenty-four hours was sufficient indication, in Dr. Weir's opinion, for a change of the dressing. The instruments were put into a five per cent. solution of carbolic acid. Dr. Weir then dwelt somewhat upon the subject of cleanliness, to which he attached great importance, although he believed that it could not replace germicides. Excellent results had been obtained by its observance alone in the hands of Mr. Tait and others. In the New York Hospital, before proceeding with an operation, the parts were washed with soap and water, and then with a mixture of turpentine and alcohol, two ounces to the pint. Importance should be given to the preparation of the sponges. They were first freed of sand by beating, then washed in warm, not hot, water, then placed in one to one thousand solution of permanganate of potash for twenty-four hours. They are then washed in warm water, then bleached by immersion in a solution of one to one hundred of sulphide of sodium, to which is added a one-fifth part of a watery solution of hydrochloric or oxalic acid, of a strength of eight to one hundred, stirred with a stick a few minutes until whitened, again washed in warm water, and allowed to stand in running water, then put into a carbolic acid solution, one to twenty, or in a solution of bichloride of mercury, one to one thousand, in which they are kept until used. Thus prepared they were cheap, and need not be again used, especially after operations in which they are liable to absorb contaminating material. If again used, they are first thoroughly washed in running water, kept for some hours in a weak solution of carbonate of soda, then placed in the antiseptic solution.

In certain wounds of the body, as of the mouth, the rectum, etc., it was more convenient to employ iodoform. It could be applied rubbed into mosquito-netting or other

material. More than forty-five grains would give rise to poisoning.

Perfect rest was sustained, even in minor operations; and an easily cleaned splint was that made of enamelled iron.

Dr. Weir then gave the statistics taken from the practice of Billroth, Volkmann, hospital records, and others, going to show that antiseptic dressings did "pay." He himself had done thirty-five amputations without a single death,—one hip-joint, seven knee-joint, seven thigh, nine leg, seven arm, and two forearm amputations.

DISCUSSION.

Dr. A. C. POST, being invited to open the discussion, said he had been much interested in the remarks made by Dr. Weir, and he himself was fully convinced of the value of what was known as antiseptic surgery, although he was not prepared to acknowledge the necessity of all the details of the treatment as given by the author. This was certainly true respecting the treatment of wounds of minor importance. He called attention to one application to wounds which Dr. Weir had not mentioned in his remarks, namely, the subnitrate of bismuth. This he had dusted over the wound in many cases of minor injury, and then applied an ordinary dressing, and had obtained excellent results thereby.

Dr. J. D. BRYANT referred to experience with the antiseptic methods as used during his service as interne in the Bellevue Hospital in 1868 to 1871. During a part of that time he treated twelve cases of compound fracture. The wound was washed with a solution of carbolic acid, and dressings applied soaked in a solution. The strength was 1 to 80 or 1 to 120, according to the purpose for which it was employed. Only two of the twelve patients died, one of them being a very severe case indeed. The limb was also put up in an immovable plaster-of-Paris apparatus. Since the spring of 1871 he had employed the Lister treatment of wounds, but the last few months had been trying the virtues of the bichloride solution, 1 to 2000. There had been but two cases in which unfavorable symptoms occurred under its use, and in those the difficulty could be traced to negligence. He had entire confidence in antiseptic treatment, and related two cases illustrative of its value in a high degree, one being a case of large scrotal hæmatocele, and the other a tumor of the parotid gland. He thought it important for the surgeon to simplify the antiseptic method if possible, so that it could be carried out with ease and efficiency by the general practitioner. The present times pointed more favorably to the use of bichloride. He employed catgut soaked in oil of juniper.

Dr. L. A. STIMSON thought the subject a complex, not a simple one; not one which related simply to the employment of an anti-

germ dressing. For him who believed that all the complications in the progress of wound-healing were due to the influence of micro-organisms the problem was a simple one; all that was necessary, in such a man's opinion, was to find some efficient germicide, and employ dressings which would tend to prevent the entrance of germs, and use the chemical which would kill any that found their way to the wound. But for the man who thought complications could also arise from some other source, although that other source was unknown to him, the question was a complex one. It was true that germs might cause septicæmia, but it could not be logically argued from that fact that all cases of septicæmia were due to the influence of germs. Moreover, it was not logical to conclude that a dressing applied because it is supposed to be antiseptic or germ-destroying is of benefit only because of its germicidal properties. The beneficial result obtained from its employment may be due to some other factor than the simple one of power to kill micro-organisms. For instance, it had been shown by Dr. Weir that the carbolyzed dressing employed for so many years had lost its carbolic acid by evaporation, and yet excellent results were obtained by its use. Now it has been found that the bichloride will become changed after being kept for five or six days and assume the form of calomel, and yet a much older preparation had been employed with excellent results. Peat had been employed with good results in its natural state, and yet Dr. Stimson had learned by certain experiments that peat was full of germs. But, then, brilliant results and disastrous failures had followed the employment of every antiseptic. The experience of no single surgeon was sufficient to test the value of all the antiseptics in all or a single department of surgery. Nevertheless, Dr. Stimson had faith in antiseptics in purifying the patient, the surgeon, and his assistants, and the instruments; in the employment of drainage and compression; and rest should also be secured. While he believed in the employment of antiseptic methods, he did not overlook the fact that other conditions might give rise to complications, to fever and sepsis, however well antiseptic precautions might be carried out. This was especially true where the bones were operated upon. The surgeon, therefore, who took unnecessary risks, placing entire dependence upon antiseptic methods for the prevention of complications, was rash to the verge of criminality.

Dr. A. G. GERSTER pointed out certain advantages which corrosive sublimate possessed over carbolic acid as an antiseptic. One of the most important was that it did not tend to dissolve the blood-clots which occluded the mouths of the divided vessels and gave rise to a bloody oozing, necessitating an early change of the dressing. During the past six

months he had employed the bichloride in his service at the Mount Sinai and German hospitals, and with entire satisfaction. He had sought to simplify the antiseptic dressing so that it could be easily made use of by the general practitioner, and had found that common sawdust soaked in the bichloride solution, one to five hundred, and then dried and put away in tight boxes until used, was a very cheap and as good a preparation as the most costly and fanciful. Ordinary cotton-batting prepared with the bichloride was also an excellent dressing. He mentioned a case of fracture of the elbow-joint in an aged man, in which it was employed, improvised, and the patient made an excellent recovery. He thought much better results were now being obtained since the thorough carrying out of antiseptic surgery. It was true that now and then unexpected suppuration would take place, even when the antiseptic dressings were applied seemingly with the greatest care. But usually in such cases the vigilant surgeon would be able to find some neglect in the details of the treatment. Very often, in his opinion, the trouble was due to the direct introduction not only of micro-organisms, but even of lumps of dirt. He mentioned a case of recurring dislocation of the shoulder-joint in which the capsular ligament was found stretched. He cut down upon the joint, excised a portion of the ligament, and applied sutures. Within a few hours the temperature indicated sepsis, and he immediately removed the dressings, opened the wound, and found three or four ligatures the centre of collections of pus, while the other ligatures, not taken from the same strand of cut, were perfectly clean. In that case, doubtless, the one ligature carried the germs of disease.

Dr. WEIR, in closing the discussion, said that he agreed with both Dr. Stimson and Dr. Gerster, although they apparently took opposite sides of the question. He agreed with Dr. Stimson that there were cases in which sepsis would develop in spite of the most careful antiseptic precautions, and that, therefore, we were not justified in undertaking hazardous operations where the object to be gained was not of importance. He did not think that we yet had absolute control of all the elements of wound complication; the antiseptic method was only one of the steps towards perfection in treatment. With regard to subnitrate of bismuth, referred to by Dr. Post, it had not so much control over erysipelas as had some of the other agents mentioned.

OWING to the secession of the old New York County Medical Society from the American Medical Association, a new county society has been formed in that city, in order to be in affiliation with the other societies throughout the country.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held January 23, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

NEURO-FIBROMATA COMPLICATING SPINA BIFIDA.

Dr. ELLIOTT presented a specimen illustrative of this affection, the case being that of a child which had come under the care of Dr. J. M. Roberts for orthopædic treatment. There was accompanying double talipes. Pressure upon the fontanelles caused fluctuation at the lumbar tumor. An injection of a fluid was made into the tumor in the course of the treatment, but was followed by convulsions, and some hours later by death. Dr. Elliott was of opinion that the tumor was due to an arrest of development in the epi- and meso-blast taking place early in intra-uterine life.

HYDRO-SALPINX.

Dr. BROWN presented the ovaries and Fallopian tubes removed from two different patients. In the first case considerable hemorrhage followed the birth of a child, and the patient was slow in recovering from the confinement. About six weeks later she began to develop symptoms of melancholia, and suffered from severe pelvic pains. A tumor was felt in the posterior *cul-de-sac*, which was very sensitive, and supposed by Dr. Brown and Dr. Dawson to be due to prolapsus of the right ovary. At the laparotomy the left ovary was found cystic, and both tubes were the seat of hydro-salpinx. The patient was much relieved by the removal of the diseased organs. In the second case the patient had suffered for some years from pelvic symptoms. She was doing well since the removal of the dropsical Fallopian tubes.

VISCERAL LESIONS IN A CASE WITH EPILEPTIFORM ATTACKS.

Dr. R. W. AMIDON gave the history of a case of epileptiform attacks occurring in a boy 7 years of age, of very bright intellect, coming from a neurotic family. When 3 years of age he suffered from measles, which were followed, according to the mother's statement, by general oedema; and at about the same time spells developed, which were treated by the attending physician with bromide of potassium, ten grains three times a day. At the time when Dr. Amidon saw the patient, there was an eruption from bromism upon the legs, face, and forehead, which readily disappeared on discontinuing the medicine. Respecting the attacks Dr. Amidon said the following facts were against the idea of epilepsy: first, he had never known a person to have seventy-two regular epileptic convulsions in as many hours, and yet retain comparatively good health and a clear head, as this

patient had done. Second, the child had a distinct recollection of each convulsion, and was always able to foretell their occurrence. Third, it never uttered a cry before the convulsion. Fourth, it never bit the tongue, nor frothed at the mouth. Fifth, there was preservation of sensibility and resistance to opening the eyelids during the attack. Certain of these facts led to a diagnosis of hystero-epilepsy and a favorable prognosis. The remedies employed in the treatment were aqueous extract of opium, *cannabis indica*, quinine, iron, tonics, regulation of the diet. There were symptoms of improvement under treatment, but relapses occurred. Death finally took place from œdema of the lungs and heart-failure. At the autopsy the stomach was found dilated, the spleen enlarged and congested, the kidneys congested, with atrophy of the cortex. The right ventricle of the heart was dilated, and there was fatty substitution in its walls; the left was concentrically hypertrophied; the right auricle was thinned and dilated. The brain was normal and well developed. Had the condition of the stomach been recognized during life, he should at once have resorted to hypodermic medication.

PLEURISY WITH PERICARDITIS.

Dr. FERGUSON presented specimens illustrating these affections, removed from a man who recently died in the hospital with the usual symptoms. He also presented specimens illustrating the condition known as surgical kidney. Independent of the recent lesion was found ankylosis of one knee and ankle, enlargement of the distal end of the femur, fatty degeneration of the muscles of the leg, and atheroma of the vessels, due to an injury which the patient had sustained twenty years ago, the nature of which he did not remember.

DILATATION OF THE STOMACH.

Dr. JOHN C. PETERS presented the stomach of the patient whose history he had reported in part at a recent meeting of the Society. At the autopsy the stomach was found dilated from four to six times its normal size, due to constriction at the pyloric extremity. There was no tumor nor malignant disease.

Dr. AMIDON asked whether any benefit had been derived from medication by the mouth.

Dr. PETERS replied that to have given medicine by the mouth would have been equal to throwing it into a swill-pail. It would not at all have been absorbed by the mucous membrane of the stomach.

CARCINOMATOUS TUMORS OF THE CALVARIA.

Dr. H. N. HEINEMAN presented the calvaria of a patient, a woman, who, in 1881, suffered from carcinoma of the right breast,

which was extirpated by the late Dr. Mason. Recently she appeared at the Mt. Sinai Hospital, presumably suffering from carcinoma of some of the internal organs. At her death, however, these were all found unaffected by malignant disease. There were some infiltrated glands in the axillary and cervical regions. The right side of the calvaria showed several bony growths,—one upon the petrous portion of the temporal bone causing considerable pressure upon the medulla, and one upon the sphenoidal bone giving rise to exophthalmus. The diploë was infiltrated, but the dura was not affected.

Dr. HEINEMAN also presented specimens illustrative of acute general tuberculosis, occurring in a child one year of age, recently arrived by steerage-passage from Europe.

CARCINOMA OF THE STOMACH.

Dr. BEVERLY ROBINSON presented a stomach which was the seat of a cancerous tumor at the pyloric end, the interest of the case relating to the diagnosis. The surgeon of the hospital was unable to recognize the tumor, which Dr. Robinson, as he believed, was able to feel on several occasions. He was of opinion that at certain times it was so covered by the liver as to be hidden from the touch, while at other times the position was such that it could be distinctly recognized by palpation.

OSTEOLIPOMA (?).

Dr. J. A. WYETH presented a tumor which had been removed from the radius, about one inch from its carpal extremity. A combination of a bony and a fatty tumor is rare, but the present case seemed to illustrate that condition. The lipoma, which consisted of two lobes of considerable size, was attached by a pedicle to a small exostosis of the radius. He was inclined, however, to accept the view suggested by the President, that the fatty and the bony growths had no special pathological relation to each other, but the presence of the one may have given rise to the other by irritation.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 10, 1884.

The President, DR. TYSON, in the chair.

Specimen of osteomyelitis of tibia. Exhibited by CHARLES M. WILSON, M.D.

GEORGE L., æt. 42, was admitted into the surgical ward of the Pennsylvania Hospital November 26, 1883. Sixteen days previously he had been knocked down on ship-board and had sustained a wedge-shaped fracture of the tibia and an oblique fracture of the fibula of the right leg about the middle. When admitted, the fragments were in

malposition and partially united. There was considerable deformity, the lower fragment of the tibia being tilted up and overlapping the upper fragment. By appropriate treatment the fracture was retained in fairly good position, and the case was progressing favorably until the afternoon of December 26, just one month after admission, when he had a severe chill, followed by a temperature of $103\frac{1}{2}^{\circ}$ F. He complained of violent pain in left shoulder-joint. He was treated with salicylate of sodium. Next morning his temperature was $102\frac{3}{4}^{\circ}$ F., with intense pain in both shoulders and elbows. The same treatment was continued, under the supposition that the case was one of acute articular rheumatism. On the afternoon of the second day, he had a severe chill, with an evening temperature of $104\frac{3}{8}^{\circ}$ F., and a presystolic mitral murmur was detected. Dr. Wilson now considered the case to be one of pyæmia, and gave massive doses of quinia, stimulants, and digitalis, but he steadily grew worse, and died of exhaustion on the morning of December 30. Post-mortem twenty-six hours after death. Rigor mortis marked. Body well nourished. Posterior portion of body much discolored. Extensive ecchymoses over arms and shoulders. Smaller patches over abdomen and chest; one and a half ounces of clear serum in the pericardial sac, with many ecchymoses over the surface of the heart. Both sides of heart relaxed and partially filled with post-mortem clots. The valves on right side appeared normal. The aortic valves were incompetent, and their free borders were roughened by recent vegetation. There was also some slight thickening and contraction. The mitral valves showed old thickening as well as signs of recent inflammation. The endocardium of the left ventricle showed numerous spots of ecchymosis. The heart weighed sixteen ounces, and its tissue was a good deal softened. Spleen normal. Left kidney weighed seven ounces, was somewhat swollen, and its tissues were slightly flabby. The capsule was thickened and somewhat adherent. The organ was congested and somewhat swollen. Right kidney weighed six ounces, and presented same appearances as the left. Liver was large, swollen, and marked by the ribs. Its surface was mottled with rounded yellowish patches, surrounded by dark-red areolæ. Section showed it to be markedly congested. Its weight was four pounds four ounces. Lungs much congested, the base of the left being anteriorly bound down by old adhesions. The brain was not examined. Examination of the fracture showed it to be ununited, and there was no callus detectable. The periosteum tore easily. On section, the medullary substance of the cavity of the tibia showed marked evidences of inflammation. There was a puffy septum of granulating tissue between the ends of the fragments. Above there was evidence of extravasated blood, and two and

a half inches above the line of fracture there was a small circumscribed medullary abscess. The medullary tissue was inflamed and streaked with red lines.

Through the kindness of Prof. Brinton and Dr. Longstreth, Dr. Wilson was enabled to show several pictures illustrative of osteomyelitis. This was the only case of death from simple fracture recorded at the Pennsylvania Hospital. This disease must be a very rare sequel of simple fracture. It is not necessarily a fatal disease, as the inflammation may become circumscribed, a depot of pus formed, and the destructive processes end there; or a portion or the whole of a bone may die or be removed. It is easy to see how a virulent inflammation going on to suppuration, with no vent to the pus, as in this specimen, could readily give rise to septic poisoning. Dr. Wilson stated that he was indebted to the courtesy of Dr. Longstreth both for the specimen and assistance in its preparation.

Dr. TYSON said that he had seen many cases of osteomyelitis from gunshot injuries during the late war; but he could not recall a case where the medullary canal was encroached upon by a condensing osteitis, as in this specimen.

Dr. NANCREDE related a case of fatal septic trouble following a simple fracture of the thigh, where the starting-point seemed to him to have been a superficial ulceration of the skin, produced by the adhesive plaster. Possibly section of the bone might have revealed an osteomyelitis; but, as the fracture was firmly united, he thought the skin abrasion the starting-point, and related two cases of pyæmia produced by equally trivial causes.

Dr. LONGSTRETH related a case seen by him when a resident physician at the Pennsylvania Hospital. The patient had a fracture of the thigh of three weeks' standing, and was apparently doing well, when chills, sweats, lung-consolidation, etc., ushered in a fatal attack of pyæmia. A post-mortem revealed osteomyelitis and general pyæmic manifestations. A possible explanation of Dr. Wilson's case is that the patient had been on board ship for three weeks after his injury, where the treatment must have been of the crudest description.

Dr. ESKRIDGE called attention to the endocardial trouble found in septic disease, which he had been taught as a student to consider was of an ulcerative form and of fatal prognostic import. He had, however, seen two cases which presented all the symptoms of ulcerated endocarditis, but which had recovered; while in two others, with a similar clinical history, post-mortem examination revealed only a simple non-ulcerative endocarditis.

Dr. SHAKESPEARE asked whether this condensing osteitis might not have been due to a previous syphilitic trouble?

C. B. NANCREDE,
Recorder.

REVIEWS AND BOOK NOTICES.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Volume VII., for the Year 1882. Philadelphia, Pa., Henry C. Lea's Son & Co., 1883.

Considering the long interval between the meeting of the Society and the issue of its Transactions, this volume might be suitably known as the *liber serotinus*. The issue of previous volumes had been provokingly, even vexatiously, delayed, and some were ungracious enough on this account to find fault with the Boston secretary; but now that a New York secretary has been appointed, it is found that the delay is still greater. If New York thus signally fails, where on the boundless continent can hope or help be found?

But let us not quarrel with our bread and butter, even though the waiter has been a long time in bringing it and we have grown much older and most weary with expectation, for the volume is a good one, and, like its predecessors, not less handsome in appearance than valuable in contents.

In the Presidential address, which is by Dr. Emmet, the author departs from the usual custom of presidents of professional associations: instead of an address upon general topics, its wise author considers a special subject,—viz., making “A Button-hole-like Opening in the Female Urethra” for diagnostic and therapeutic purposes. In his concluding remarks Dr. Emmet makes the following statements:

“I have presented a mode of exploration for the female urethra, the advantages of which are not urged upon theoretical grounds, but from actual experience and close observation extending over several years.” . . . “It is claimed that the advantages from the operation for exploration are greater than can be gained by any other method known to the profession, as the whole canal can be fully exposed, and any mode of treatment suggested by the condition of it can be easily applied.”

The operation is done by introducing a block-tin sound, large enough to put the tissues on the stretch, into the urethra, and then cutting through to the canal from the vaginal surface; care must be taken not to carry the incision either so far forward as to injure the orifice of the urethra, or so far backward as to divide the neck of the bladder: where exploration only is desired, the incision may be closed immediately after this is accomplished.

The most important criticism upon Dr. Emmet's address was made by Dr. Skene, whose high authority in all matters pertaining to diseases of the female urethra and bladder no one questions. Dr. Skene asserted that the method is excellent for the diagnosis of urethral polypus or any of the neoplasms, and that there its value ceases; it is very much

inferior, for example, to the endoscope in the diagnosis of ulceration and of fissure.

The Proper Use of Ergot in Obstetrics is the title of the next paper, its author being Dr. Joseph Taber Johnson, of Washington, D.C. Dr. Johnson is quite radical in his views, declaring that he thinks the human race would be better off if ergot were banished from the lying-in room,—an opinion which will hardly be upheld by many in the profession.

Dr. Drysdale, of Philadelphia, is the author of the next paper, *The Ovarian Cell, its Origin and Characteristics*. Here is a paper elaborate, controversial, and yet inconclusive; at least the profession is slow to accept the conclusions of its author. Mr. J. Knowsley Thornton, of London, who was present, in discussing the paper, stated that from his experience the practical value of the Drysdale corpuscle is often at least immaterial. The results of the study of Dr. Garrigues in regard to the microscopic characters of ovarian fluids, are well known as directly antagonizing the statements of the author of this paper. It will not do, however, to ignore the researches of so industrious a man as Dr. Drysdale, researches which have been carried on for so many years, and which include the examination of the fluids from two thousand abdominal cystic tumors. If the Society desires the establishment of the truth in regard to this greatly-controverted matter, it could not do a wiser thing than to refer the subject to a committee of microscopists, giving them two or three years to make their report; let us have some positive knowledge, some fixed conclusions, in place of continued controversy.

Dr. R. Stansbury Sutton, of Pittsburg, contributes a paper entitled *Some Remarks on Ovariectomy, with Special Reference to the Treatment of the Pedicle*. Dr. Sutton gives the various methods of treating the pedicle which have been or are practised by famous operators, refers to the use or the non-use of carbolic acid spray, and states fourteen conditions which he believes lead to success, and sixteen which lead to failure in ovariectomy.

The next paper is by Dr. Fordyce Barker, and is entitled *Leucorrhœa considered in Relation to its Constitutional Causes and Treatment*. In these days, when if there be not too much surgical there certainly is too little medical gynæcology, Dr. Barker's paper is peculiarly valuable. It may be useful for those who are in danger of becoming enamoured of uterine surgery to ponder such sentences as the following from this veteran practitioner, this wise observer: “I have seen leucorrhœa, and various morbid conditions of the os and cervix, disappear by the use of proper hygienic measures, and such treatment as was indicated for the improvement of the general health.” . . . “In very many cases in which leucorrhœa and other uterine disorders have been the consequences of parturition, local treatment is useless, and often positively in-

OLEATES.

These preparations are salts formed by the union of oleic acid with the respective bases indicated. They are designed for external application, and owe their superiority to the well-known penetrative property of oleic acid. Their medicinal action is entirely dependent on their bases, which are quite readily introduced into the circulation when applied epidermically in this form. As a means of securing the constitutional effects of these bases, their application in the form of the oleates offers many advantages, which will be readily appreciated, especially in the treatment of children and in cases of irritability of the stomach.

Although the advantages to be derived from the combination of bases with oleic acid were recognized as early as 1872, the use of these compounds has not become general, and principally because of defects in the pharmaceutical preparation, the original crude method of their preparation not having been improved upon. Within the past year Dr. J. V. Shoemaker, of Philadelphia, has made the subject of the oleates one of especial study and experiment, both from a pharmaceutical and a clinical standpoint. The result has been the production of a number of very eligible compounds, and the discovery of therapeutic properties hitherto unrecognized. We have secured from Dr. Shoemaker full information touching his methods, and are now prepared to furnish oleates of the following metals, which have been found of great value in the affections indicated:

ALUMINIUM.—A valuable astringent, serviceable in eczema, and as a dressing for burns.

ARSENIC.—This preparation contains twenty (20) grains of oleate of arsenic to the ounce, and is employed as a caustic in the treatment of lupus, epithelioma, etc.

BISMUTH.—An excellent emollient application.

COPPER.—For the treatment of ringworm, etc.

IRON.—Readily soluble in the fats, and use-

ful both as a local astringent and as a general tonic.

MERCURY.—Useful as a discutient to inflammatory exudates, and for the constitutional effect of the metal.

LEAD.—A cleanly and efficient substitute for Hebra's Diachylon Ointment.

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ZINC.—An impalpable powder, and of great value in intertrigo (chafing).

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OUR LIST OF THESE COMPRISES:

Aconitine (2 per cent. of the alkaloid).

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Morphine (10 per cent. of the alkaloid).

Morphine and Mercury (5 per cent. morphine and 20 per cent. mercuric oxide).

Quinine (25 per cent. of the alkaloid).

Strychnine (2 per cent. of the alkaloid).

Veratrine (10 per cent. of the alkaloid).

OINTMENTS OF OLEATES.

These contain the several metals mentioned above. They are much more cleanly than ointments as ordinarily prepared, and for all the properties of ointments are much to be preferred.

Circulars fully descriptive of the above, and such other information touching the therapy of the oleates as has appeared, will be furnished gratis on application.

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Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

The most reliable tests, carefully applied, will satisfy every one that BOUDAULT'S PEPSINE HAS A MUCH HIGHER DIGESTIVE POWER than the best Pepsines now before the profession, and is therefore especially worthy of their attention.

BOUDAULT'S PEPSINE is prepared in the form of Pepsine Acid and Pepsine Neutral. It is sold in bottles of one ounce, with a measure containing exactly five grains; also in bottles of 4, 8, and 16 ounces for dispensing.

BOUDAULT'S WINE OF PEPSINE.

Formula of Dr. Corvisart.

The taste of Pepsine being perfectly disguised in this Wine, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder. This Wine is tested so that a tablespoonful of it is equal in digestive power to ten grains of Boudault's Pepsine in powder. Sold only in bottles of 8 ounces.

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E. FOUGERA & CO., New York.

TANRET'S PELLETTIERINE.

FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

This New Tanifuge, the Active Alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker Beaujon, etc., have all been most satisfactory. Dr. Dujardin Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and if certain preliminaries are observed success will be insured. Sold only in bottles containing one dose.

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ALKALOID AND ACTIVE PRINCIPLE OF SPURRED RYE.

This is a well-defined alkaloid that must not be confounded with Ergotine or other extracts. It is given in doses of from $\frac{1}{4}$ to $\frac{1}{2}$ milligramme (1-240th to 1-120th of a grain) in all cases where Ergot is indicated, viz., Flooding, Post Partum Hemorrhages, Metrorrhagia, etc. It is put up in the following forms:

Syrup, containing $\frac{1}{4}$ milligramme to each teaspoonful; Dose, from 1 to 6 teaspoonfuls per day.

Solution, for hypodermic purposes, containing 1 milligramme to each cubic centimetre; Dose, from 3 to 10 drops.

The Institute of France has awarded one of its prizes to Mr. Chas. Tanret for the discovery of these alkaloids.

Tanret's Pelletierine and Ergotinine are only prepared by Mr. Chas. Tanret, Laureate of the Institute of France, 64 Rue du Rempart, Paris.

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(Laureate of the Institute of France)

DRAGÉES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that Dr. Rabuteau's Dragées, Elixir, and Syrup regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compt-Globules*

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Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragées; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragées will be sent free to any physician mentioning THE PHILADELPHIA MEDICAL TIMES.

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jurious, but a cure results from appropriate constitutional treatment."

The next paper is on *Care of the Perineum*, its author Dr. Theophilus Parvin. The view advocated by the author is that protection of the perineum in the latter part of the second stage of labor is best secured by having the patient lying upon her side, and preventing the exit of the head until the vulvo-vaginal orifice is sufficiently dilated: should rupture occur, the immediate operation is advised, but the usual subsequent tying the knees together rejected.

The Relative Value of Hysterectomy and of the Complete Removal of the Uterine Appendages for the Cure of Uterine Fibroids is the title of an elaborate paper by Mr. Thornton. Mr. Thornton takes the ground that the operation of complete removal of the uterine appendages for fibroid and fibro-cystic tumors of the uterus is indicated in all cases which need the surgeon's aid, as an equally certain cure, and a more conservative and less dangerous operation than that of supra-vaginal hysterectomy. The paper elicited a most interesting discussion, in which Drs. Goodell, Thomas, and Kimball were the chief participants. Dr. Thomas very justly took the position that to expose a woman to the dangers of oöphorectomy or hysterectomy simply because she has a solid fibrous tumor of the uterus is a most unjustifiable procedure, and that the conservative surgeon will avoid any approach to hysterectomy for solid or fibro-cystic tumors of the uterus, unless the life of the patient seems to be in danger on account of the existence of the growth.

The next two papers are on *Electricity in Extra-Uterine Pregnancy*, by Dr. Garrigues, and *The History of Twenty-One Cases of Extra-Uterine Pregnancy*, by Dr. Thomas. The conclusions of the first author, made after a careful study of the subject, are:

"1st. Experience has proved electricity to be an efficacious and safe agent to arrest extra-uterine pregnancy during the first three months, and perhaps the pregnancy in some of the cases had even advanced more or less into the fourth month.

"2d. It seems likely that the same agent might be profitably used at any period of foetal life."

Dr. Thomas takes the following positions: Before the end of the fourth month, destroy the life of the foetus by electricity; if interference be necessary after the fourth month, perform laparotomy, or, if the tumor be low down in the pelvis, elyototomy; if the pregnancy be abdominal, wait the full term of gestation, and deliver by laparotomy, or by elyototomy combined with the forceps or manual delivery; if the full term of pregnancy be passed, and the foetus dead, wait and watch, if it be possible, until nature demonstrates the outlet by which she desires extrusion to be effected, and then aid this effort.

The Influence of the Constant Use of High-Heeled French Shoes upon the Health and Form of the Female, and upon the Relation of the Pelvic Organs, is the title of an interesting paper by Dr. Samuel C. Busey, of Washington. Dr. Busey ably presents the injurious consequences that may result, and gives scientific proof that they ought to occur, from French high-heeled shoes. In the remarks which followed the reading of the paper both Dr. Barker and Dr. Thomas stated that while theoretically Dr. Busey's views were correct, yet they had not found the injury which was to be anticipated from wearing the shoes in question. Dr. Barker seemed to think that the shoe question was one which would be settled by the opinion of men, saying that "women have a sharp instinct, and will so array themselves as to make themselves attractive to the opposite sex." While this statement is generally true, yet sometimes women follow ugly and injurious fashions that are condemned alike by sensible persons, whether male or female; for example, what true admirer of womanly beauty, intellect, and purity does not abhor the hideous hiding of the forehead, animalizing, in almost every case, instead of spiritualizing the expression?

Mechanical Therapeutics of Versions and of Flexions of the Uterus is the title of a long and abundantly-illustrated paper by Dr. Ely Van der Warker, of Syracuse, New York. In the beginning of his paper Dr. Van der Warker says, "The correction of a flexion or version of the uterus mechanically, with certainty, comfort, and safety to the subject, depends, in the first place, upon a few fixed and absolute conditions which cannot be violated. I enumerate them: (a) The limits imposed by uterine mobility; (b) the limits imposed upon the action of pessaries by the vagina; (c) a pessary must be adjusted with proper regard for the safety of the pelvic soft parts; (d) a pessary must be so adjusted as not in any way to retard or arrest the function of any pelvic organ, nerve, or vessel."

After discussing these propositions, the author makes the usual classification of pessaries,—vaginal with external support, those that are solely vaginal, and, third, intra-uterine,—making some original and scientific subdivisions in each class. The whole paper is worthy the close study of any one who attempts to treat uterine diseases, but we have not space for any complete analysis of it.

Dr. J. Collins Warren contributes a paper entitled *A New Method of Operating for the Relief of Rupture of the Perineum through the Sphincter and Rectum*. Dr. Warren says, "The principle of the method described in this article consists in shutting out the rectum entirely by a flap-operation, so that it shall no longer enter as an element to be considered in the healing process. The material of which the flap is composed is that usually cut away by the scissors, and consists of vaginal and

vulvar mucous membrane, and also of a certain amount of cicatricial tissue which is to be found at the margin of the rent. The flap is formed by dissecting the 'butterfly' from within outward, preserving the materials just mentioned in one continuous mass, the pedicle being formed by the entire free margin of the septum, a hinge on which the flap is swung over so as to exclude the rectum from view." Dr. Warren advises the knife rather than the scissors to be used in the dissection. In this operation, of course, no tissue is cut away; it is all utilized. The plan seems so reasonable, and it has proved so successful in the hands of Dr. Warren, that it is well deserving of being followed by others.

Measurements of the Uterine Cavity in Childbed, begun by Dr. Sinclair, are continued by Dr. Richardson; he here presents a fourth and fifth series of one hundred and eight cases each. As no deductions are proposed to be made until the entire number of cases reaches one thousand, it is unnecessary to make other reference to this work at present.

Surgical Operations upon the Pelvic Organs of Pregnant Women is the title of a very able and interesting paper by Dr. Matthew D. Mann, of Buffalo. The following are the author's conclusions:

"1. Pregnancy is not so decidedly a bar to operations on the pelvic organs as is generally supposed. The results, however, vary with the operation and the organ operated upon.

"2. Union of denuded surfaces is the rule, and the cicatricial tissue formed during the earlier months of pregnancy is strong enough to resist the shock of labor at term.

"3. Operations on the vulva involve very little danger either to mother or to child.

"4. Operations on the vagina are likely to cause severe hemorrhages, but are not otherwise dangerous.

"5. Venereal warts and vegetations of large size and non-syphilitic are best treated by removal, whether they occur in the vagina or are confined to the vulva.

"6. Applications of nitrate of silver and astringents of this class may be made with safety to the vagina and cervix. Diffusible poisons, like carbolic acid and iodine, should not be used pure or in strong solutions for such applications.

"7. Operations upon the bladder and urethra are not dangerous, or likely to be followed by abortion.

"8. Operations on the rectum involving the sphincter ani, even if slight in their character, are dangerous.

"9. The operation for vesico-vaginal fistula should not be undertaken during pregnancy, as the dangers of hemorrhage and abortion are considerable.

"10. Plastic operations upon the cervix and perineum may, if necessary, be undertaken in the earlier months of pregnancy with a fair

prospect of success, and with a good chance that the results may not be impaired by labor.

"11. Small polypi of the cervix may best be treated by torsion or strong astringents. If cut, there is some danger of abortion following.

"12. Large polypi may, if causing hemorrhage, be removed at once with a fair chance of good results. If not doing any harm, then removal is best left until near the close of pregnancy.

"13. Cancer of the cervix discovered during pregnancy should, if possible, be removed at once."

Dr. W. H. Baker, of Boston, contributes a paper upon *Hyperæmia of the Vesico-Urethral Membrane*. This paper is quite a practical one, and is illustrated by some chromo-lithographs.

The final paper is *A Memoir of the Late James P. White*, of Buffalo, by Dr. T. G. Thomas. Dr. White was a good man, and Dr. Thomas has not said a word too much in his praise.

The volume is concluded with a list of gynæcological journals and societies, and the usual but most valuable gynæcological index.

GLEANINGS FROM EXCHANGES.

A RAPIDLY FATAL CASE OF ARSENICAL POISONING.—The following case presents several points of interest, the chief, however, being the rapidity with which a fatal result ensued. It was reported by David W. Finlay, M.D., in the London *Lancet*.

Richard H., aged 51 years, a man in moderate health, although not robust, swallowed by mistake, at 8.30 P.M. on February 27 last, nine drachms of a preparation for softening the skin of the hands, supposed to consist chiefly of glycerin, which was contained in a small flask-shaped spirit-bottle. He was seized with a feeling of faintness and collapse, and slight epigastric pain. He was brought without much delay to the Middlesex Hospital, arriving there about nine o'clock; and it was stated that he had not vomited. His skin was cold, and his face bedewed with clammy sweat; pulse slow and very feeble; respiration shallow; pupils moderately dilated, but acting to light. He presented generally the appearance of collapse, and complained of headache and pain at the epigastrium, with a sense of constriction across the chest. He was quite conscious, and kept spitting to clear his mouth of viscid mucus. An emetic of mustard-and-water was immediately administered, but did not induce vomiting, and the stomach-pump was then used, the stomach being well washed out. The matter removed from the stomach appeared to consist almost entirely of the mustard-and-water which had been given as an emetic.

Some brandy was then administered, and he was removed to the ward and put to bed between warm blankets, hot bottles being also applied. Notwithstanding, he speedily became pulseless, and, although stimulants were freely given, he rapidly sank, and died at half-past nine o'clock, one hour after swallowing the fatal dose.

At the post-mortem examination made by Dr. Fowler, the mucous membrane of the larynx was found moderately congested; the trachea was brightly injected throughout, and, with the larger bronchi, contained some very viscid mucus. The lungs were emphysematous and engorged. The right cavities of the heart contained some fluid blood and clots, the left were contracted and nearly empty; the valves and muscular substance were normal, but the endocardium of the left ventricle showed numerous ecchymoses. The liver and kidneys were congested, the spleen normal. The stomach contained about six ounces of turbid fluid, consisting apparently of brandy, mustard in solution, and viscid mucus. The mucous membrane was intensely injected; there were also a very few small ecchymoses, but no erosion of mucous membrane. The duodenum and jejunum contained pale pulaceous matter; the contents of the ileum and colon were brown and semi-solid. The bladder was contracted. It was, of course, sufficiently obvious that death was due to poison, but there seemed nothing either in the symptoms or post-mortem appearances to point conclusively to the particular poison, and hence at the inquest which was held an analysis of the stomach and its contents was ordered. This resulted in the detection of arsenious acid in large quantity, both in the matter removed from the stomach at the post-mortem examination, in the tissues themselves, and in the small quantity of fluid left in the bottle from which the unfortunate man had swallowed the poison.

What remained of the latter, together with the quantity which the bottle was known to contain by a mark left on it in consequence of the length of time the solution had remained in it undisturbed, supplied data for an estimation of the quantity of the fatal dose. The former, amounting to half a drachm, converted into sulphide, was found to represent exactly a decigramme, or rather more than one grain and a half, of arsenious acid, and, the total quantity of liquid in the bottle being nine drachms, would equal twenty-seven grains and three-quarters. Deducting from this total the quantity left in the bottle, the conclusion is reached that upwards of twenty-six grains had been swallowed. The fatal period is one of the shortest on record; indeed, I am aware of only one instance in which a more rapidly fatal result ensued. This occurred in the case of a youth aged 17, who was stated to have died within twenty minutes after a large dose, the symptoms being of a

tetanic character. Reference is made to it in Taylor's "Principles and Practice of Medical Jurisprudence," vol. i. page 256, second edition, but details are wanting. In the present case, the largeness of the dose, its state in solution, and the comparatively empty condition of the stomach, all of which would favor rapid absorption, sufficiently account for the speedy death. The same considerations also account for the somewhat abnormal character of the symptoms, those referable to the stomach being slightly marked, while collapse was profound and conspicuous. Such cases lend support to the opinions expressed by M. Vryens, whose experiments and the conclusions drawn therefrom are set forth in the "Archives de Physiologie," vol. viii., 1881. The latter are to the effect that the fundamental character of arsenical poisoning consists in a perversion of the entire nervous system, and that the pneumogastric, sympathetic, and vaso-motor nerves especially are paralyzed or reduced to a state of paresis.

MISCELLANY.

PHYSICIANS AND DRUGGISTS.—The following admirable series of rules have been submitted for the adoption of pharmacists and physicians in Cincinnati:

First.—Pharmacists shall not prescribe medicine for diseases.

Second.—Pharmacists shall not too frequently fill prescriptions which might lead to disease or vicious habits.

Third.—Pharmacists shall only supply medicines on prescriptions or where the complaint is stated by a customer to be one dangerous to life.

Fourth.—The right to refill prescriptions, when presented by the person to whom they were issued by the physician, is acknowledged.

Fifth.—Physicians should not dispense medicines, except in cases of emergency, nor prescribe proprietary, secret, or copyright medicines.

Sixth.—The prescription when in the hands of the pharmacist and filled shall be the latter's property, as it may be necessary for his protection.

Seventh.—The use of prescription-blanks by physicians, with the address of any individual pharmacist on them, is liable to misconstruction, and shall be discontinued.

Eighth.—The evils arising from the wholesale use of patent medicines are recognized, and their use discountenanced.

Ninth.—A Board of Arbitration consisting of five physicians and five druggists shall be appointed, who shall subscribe to these rules. This board shall hear all complaints against any subscriber to these rules for their violation, and shall decide disputes.

THE NEW YORK STATE MEDICAL SOCIETY.—From telegraphic dispatches from Albany just received, it appears that the New York State Society, in adopting a course which separated it from the American Medical Association and isolated it from the profession throughout the country, has finally alienated some of its oldest and most respected members. Without making comparisons, which are invidious, we would simply point to the names and relative position in the profession of the leaders of the two great parties in the controversy to show which better deserves the confidence and respect of the profession and the community. In New York City it was found necessary to form a new county medical society, which is in affiliation with the other county medical societies throughout the country. If the apparent necessity for a similar course has been forced upon the very respectable minority in attendance upon the meeting (but representing in reality the majority of the profession in New York State) we regret it, but consider it preferable to the unseemly wrangling which has disturbed the harmony of the last few meetings of this association. When the specialists find that they will have to go into a corner and flock by themselves, they may have cause to repent of their action and regret their loss of prestige in the profession. An account of this meeting will appear in our next issue.

THE PHILADELPHIA NEUROLOGICAL SOCIETY.—On Monday evening, January 28, 1884, a meeting of physicians of Philadelphia and vicinity who are specially interested in nervous and mental diseases was held at the hall of the College of Physicians, Thirteenth and Locust Streets, and organized the Philadelphia Neurological Society. The society will hold stated meetings on the fourth Monday of every month. The officers are:

President.—Dr. S. Weir Mitchell.

Vice-Presidents.—Drs. Charles K. Mills and Isaac N. Kerlin.

Secretary and Treasurer.—Dr. James Hendrie Lloyd.

Council.—Drs. S. Preston Jones, Wharton Sinkler, and J. T. Eskridge.

THE PHILADELPHIA CLINICAL SOCIETY, late the Northern Medical Association, reorganized January 25 at the College of Physicians. A large number of new members were enrolled, and the following officers elected for the ensuing year: President, Dr. Henry Beates, Jr.; first vice-president, Dr. E. E. Montgomery; second vice-president, Dr. Hannah T. Croasdale; corresponding secretary, Dr. J. E. Richardson; recording secretary, Dr. J. G. Heilman; reporting secretary, Dr. G. Betton Massey; treasurer, Dr. L. Brewer Hall; censors, Drs. A. S. Barton, S. N. Troth, Albert H. Smith, James B. Walker, and Henry Rihl. To this Society women physicians are eligible, as may be seen from the list of officers.

The *Journal of the American Medical Association* has successfully entered upon its second volume, and shows marked improvement in proof-reading; but somebody is still responsible for a good deal of uncertainty about French spelling and accents ("*Annals de la Société Medico-Chirurgicale de Liege*," for example).

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL has been so successful that it will move to a new building on or about February 1, 1884, which will enable it to give hospital advantages to its matriculates. The new building is very large, being five stories high and having a front of ninety-five feet. The new announcement gives a list of one hundred and forty physicians, who were matriculates for the year ending November 1, 1883.

THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES has had seventy-two paying members in its different classes during the past term. During the nine and a half months from its opening there were treated three thousand three hundred and one new patients.

NOTES AND QUERIES.

ELISHA HARRIS, M.D.

Dr. Elisha Harris, Secretary of the State Board of Health of New York, died at Albany on the 31st ult., from peritonitis, after a week's illness. He was graduated at the College of Physicians and Surgeons in New York in 1849, and subsequently devoted himself to State medicine. He was secretary of the American Public Health Association from the time of its organization, and was very active in aiding the Sanitary Commission during the war. From 1866 to 1876 he was Sanitary Superintendent and Registrar of Vital Statistics in New York City. In 1881, becoming a member of the State Board of Health, he became very active in organizing and perfecting its work. He was known as a writer upon vital statistics and sanitary matters, being a valued contributor to the Proceedings of the American Public Health Association. He died in the 60th year of his age.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 26, 1884, TO FEBRUARY 2, 1884.

ALEXANDER, CHARLES T., MAJOR AND SURGEON.—So much of Paragraph 1, S. O. 211, September 14, 1883, as directs him to report in person to the commanding general Department of the Missouri, for duty, is revoked, and he will, upon the expiration of his present leave of absence, proceed to St. Louis, Mo., and assume duty as attending surgeon and examiner of recruits in that city. Paragraph 1, S. O. 21, A. G. O., January 25, 1884.

ELBREY, FREDERICK W., CAPTAIN AND ASSISTANT-SURGEON.—Present leave of absence extended six months. Paragraph 9, S. O. 24, A. G. O., January 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JANUARY 19, 1884, TO FEBRUARY 2, 1884.

P. A. Surgeon ROBERT WHITING detached from the hospital Norfolk, Va., and ordered to the "Colorado."

Assistant-Surgeon H. B. FITTS detached from the "Jamestown" and ordered to the coast survey steamer "Gedney."

P. A. Surgeon F. ANDERSON granted leave of absence for six months.

P. A. Surgeon S. W. BATTLE detached from the U.S. steamer "Gedney" and placed on sick leave.

PHILADELPHIA, FEBRUARY 23, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE ON PHTHISIS PULMONALIS.

Delivered at the Philadelphia Hospital

BY JAMES TYSON, M.D.,

One of the Physicians to the Hospital, and Professor of
General Pathology and Morbid Anatomy in the University
of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I wish to-day to call attention to a series of cases the discovery of a cure for which will certainly be rewarded by immortality. I refer to phthisis pulmonalis, or, as it is commonly called, consumption. It is not possible to bring before you a class of cases the interest of which is greater, or the practical importance of a correct understanding of which is more obvious. Up to the present time, it is to be regretted that we have found no specific remedy for this affection. I do not mean to say that advance has not been made in the treatment of phthisis, for this is not the case. At the same time, we are, in a large majority of cases at least, after a certain stage has been reached, utterly powerless to influence the disease favorably. I desire in the course of this lecture, if time permits, to illustrate at least three stages, and to endeavor to give you some insight into the pathology of the process, as it is understood to-day, on a correct notion of which will be based the successful treatment, if such is ever discovered; also to lay before you the treatment which I think is most useful.

The first patient is 32 years of age, unmarried, a driver and loader of wagons. He was admitted to the hospital on November 6, 1883. He knows nothing of his grandparents, but his parents are both living and well. He has brothers who are also in good health. This we should call a good family history. He had malarial fever when fifteen years old. Since then he has had almost no sickness. The present attack began about October 1, 1883, when, after exposure, he acquired a cough, which was accompanied by considerable expectoration. Shortly afterwards hemorrhage appeared, which continued at intervals for over a month.

At times he would have three or four hemorrhages in a day, sometimes losing as much as a gill of blood. He gradually lost flesh and strength. He also suffered from shortness of breath.

Such a history of course suggests a physical examination of the chest. This I shall now make before you. It is desirable that all starched shirts should be removed; but, on the other hand, it is not necessary, or even desirable, that a person to be thus examined should be completely stripped. A thin undershirt is the most suitable medium through which to make an examination, except for inspection, for which the chest should be bared.

Inspection here reveals no striking difference in the degree of movement on the two sides, nor is there retraction of the chest-wall on one side compared with the other.

Now as to the results of *percussion*. First, on the clavicle. On the left side there is evident flatness in this situation. Above the clavicle there is impaired resonance. Below the clavicle the resonance is impaired, and this impairment of resonance continues downward as low as the fourth rib. In the left axilla the percussion-note is good. Let us now examine the back of the left chest. The thick walls of the posterior part of the chest will of course give less resonance than the thin anterior walls. Still, we find a decided difference in percussing above the spine of the scapula on the two sides. There is marked flatness on the left side, and the resonance is impaired as low as the angle of the scapula. On the right side, both in front and behind, the resonance is good.

I shall now *auscultate* the chest. In practising auscultation, the direct application of the ear is more satisfactory than the mediate method by a stethoscope. It is only when we desire to localize sounds or examine the heart that a stethoscope is of especial advantage. I find that the respiratory murmur is feeble both in inspiration and in expiration and on both sides, but more particularly on the left, below the clavicle. This is somewhat different from what we should have expected, but I shall try to explain the cause of this later on. There is the same feebleness of respiration posteriorly.

As to *vocal fremitus*, I can scarcely detect any difference in the amount of vibra-

tion, which is feeble on both sides, below the clavicles. In point of fact, the vocal fremitus is possibly a little more distinct on the right than on the left side. These physical signs are not precisely what I expected to find, and make the case less simple than I should desire for the purpose of illustration.

But what do these physical signs teach us? We have found decided impairment of resonance on the left side, both anteriorly and posteriorly, which means that the normal vesicular structure of the lung has in some way been substituted by solid material. The feebleness of respiration upon the left side, as compared with the right side, may be due in the early stages of the disease to the interference with the entrance of air into the vesicles, thus preventing their dilatation and the respiratory murmur incident to this act in health. Or it may be due to the interposition of a thickened pleura. There is one sign which, at first thought, is inconsistent with the view of simple consolidation; that is, the vocal fremitus is slightly diminished, rather than increased, as we might expect. This diminished fremitus is also probably due to a thickened pleura. There has probably been a plastic pleurisy, which has caused this thickening, this interference with the transmission of vibrations. Such thickening also interferes with the conduction of the respiratory sounds. More frequently there is, with dulness on percussion, increased vocal fremitus and bronchial breathing, or, where the vesicular element of the respiratory sound is still present, there is a roughening of the normal respiratory sound with prolonged expiration, known as broncho-vesicular breathing. This is not present in this case.

I believe, however, that there is a process of consolidation going on in the left lung, and that it is a phthisical process. What is the nature of this solid material which has been deposited? You will probably answer that it is tubercular. The answer is correct, but may be met with another question, What is tubercular material? The older views made it a special substance poured out from the blood into the air-vesicles. To-day it is mainly regarded as inflammatory. I certainly think that the tubercular process is inflammatory, but the product is a specific inflammatory new formation, because it is due to a specific poison. That is a specific in-

flammation which results from a specific cause, distinct and separate from the ordinary causes of inflammation. Thus, we have syphilitic, tubercular, and scrofulous inflammations. All these are specific, because they are produced by causes distinct from those of ordinary inflammation. These causes of inflammation occasion products which are more or less peculiar.

There is every degree in the distinctiveness of this tubercular process, from that in which it is readily recognized by its local peculiarities to that in which it is barely distinguishable.

As to the specific agent which is responsible for it, views are not altogether settled, and it would not be profitable to discuss them at too great length. According to some it is a special virus, while according to another view the phenomena are the result of a peculiarity of the individual, either inherited or acquired, as a result of which inflammation in the lungs tends to take on this character. Usually, when a person in health has bronchitis, the cough and expectoration gradually diminish, and the inflammation passes away in a short time. In other individuals the cough hangs on, and the expectoration does not diminish, but is peculiarly thick and inspissated. Sooner or later, in such a case, a feverish condition manifests itself, the cough and expectoration grow worse, and shortness of breath appears. On examining the chest, impairment of resonance is found, as in this patient. The first cough is the result of bronchitis; the later cough is due partly to bronchitis and partly to irritation from the tubercular deposit.

If the lung were examined in the incipient stage of phthisis, the evidences of bronchitis or inflammation of the mucous lining of the bronchi would be first found. After this has existed for a certain length of time there is infiltration of the walls of the air-vesicles, and particularly at the angles of the vesicles. These are filled up with the inflammatory new formation, which is tubercular, and which may present the microscopical characteristics, more or less distinctive, of tubercle. With this, however, we have nothing to do to-day, but shall confine ourselves to the clinical aspects of the disease. Nor shall we discuss the infectious theory of tuberculosis, or have anything to say at present as to its relations to the *bacillus tuberculosis*, about which so much is being said and written.

How should such a deposit affect the physical signs? In the first place, in the beginning, there is an impediment to the entrance of air, and, as a result, feebleness of respiration. This feebleness of respiration appears before the broncho-vesicular breathing. There is also impairment of resonance, on account of the presence of solid matter.

From this initial stage there are two ways in which the tubercular process may extend, one which is peripheral or centrifugal, and a second which is central or centripetal. In the first, or peripheral, mode of extension the vesicles become more and more involved, until large areas of vesicular structure are substituted by the solid tubercular matter. Remember, however, that the deposit is not directly into the cavity of the vesicle. It takes place first in the walls of the vesicles, and as these become thicker they encroach more and more upon the lumen of the vesicles and infundibula, until they are converted into a solid mass, which gives rise to the dulness on percussion, and the bronchial breathing. The air is shut out from the air-vesicles, and the only sound heard is that produced in the bronchi, which is conducted to the ear by the solidified lung. This mode of extension causes the rapid forms of phthisis, which terminate in from six weeks to one year.

The second mode of extension is centripetal. In this form the disease travels towards the root of the lung along the bronchi, the walls of which become infiltrated. The vesicles are thus left comparatively intact, while there is peri-bronchial infiltration with tubercular matter. This mode of development is less rapid than the peripheral, and gives rise to the cases of chronic phthisis which last from two to twelve years. In the centrifugal process the essential structure of the lung is affected, but in the centripetal the cells are less involved, while the walls of the bronchi are largely implicated. Hence the longer duration of the latter.

There is no consumption which is not preceded by bronchitis, except, probably, acute general miliary tuberculosis. Not very long ago it was thought that bronchitis and tuberculosis were quite independent of each other; but to-day we are satisfied that every consumption, with the exception just mentioned, begins with bronchitis. It is this which is the proximate

cause of the tubercular process, although it must be superimposed upon the tendency above referred to.

The second patient whom I show you illustrates the effects of the infiltration of large areas with this tuberculous matter; as a result of which there is flatness on percussion over a large portion of the right side anteriorly. Instead of feebleness of respiration and diminished vocal fremitus, there is bronchial breathing and increased vocal fremitus.

The next patient illustrates the third stage of the disease, the formation of cavities. As the infiltration goes on, and larger areas of the lung-tissue are involved, the tubercular matter finds difficulty in being properly nourished, and, as a result, dies. The central parts, as a rule, die first. The cells which make up the deposit undergo fatty degeneration, softening, and liquefaction. In typical cases, as soon as the area of consolidation is large enough to interfere with the proper nourishment of the inflammatory mass, it dies, softens, and liquefies, causing a cavity. This does not always take place in the same way. Softening usually begins when the cheesy tubercular mass reaches half an inch to an inch in diameter. The softened interior of the deposit must communicate with a bronchial tube before the signs of a cavity manifest themselves. Sometimes the softening begins with ulceration of the mucous membrane of a bronchial tube, the ulcer grows larger, the mass is brought into communication with the air; it softens, breaks down, and is carried away in the expectoration.

As stated, the case now presented illustrates the softening process. The resonance over a cavity may be impaired. This is due to the existence of consolidated lung-tissue around the cavity. If the vomica is large enough, the resonance will be tympanitic, and sometimes the cracked-pot sound, which is diagnostic of a cavity, may be developed. On the left side of this man's chest we get tympanitic resonance. In order to get tympany it is necessary to percuss heavily. On auscultation, I hear crackling at the left apex, produced by air passing into softened matter.

According as the disease is rapid or slow these stages are reached sooner or later. For instance, the sickness of the first patient dates back to the 1st of October, 1883; that of the second began

three years ago; while in the third man the disease began two years ago. While the general statement that the more advanced the disease the longer it has lasted is true, yet its progress is more rapid in some cases than in others.

The hour has so nearly expired that I shall have but little time to devote to the consideration of the treatment; but I shall do what I can. The important point to remember in connection with the treatment of consumption is that it is an inflammation. It is true that it is a specific inflammation, and on that account more difficult to treat. Some forms of specific inflammation are easily treated, because we have specific remedies for them; syphilitic inflammation is one of this kind, because we have in iodide of potassium and mercury specifics for this disease. Some day we may discover a specific remedy for the specific inflammation of consumption,—a remedy which will give us the same power over that disease which we now possess over syphilis. Until such specific has been found, we must treat the disease as we should any other inflammation. As this is not a sthenic inflammation, we would, of course, not bleed; but we would use that which is found to be so useful in other forms of chronic inflammation,—namely, counter-irritation. To my mind, the first rational treatment in cases of consumption is counter-irritation. This may be done in various ways. If you wish to do it gently and not alarm the patient, mustard might be employed, or iodine or croton-oil may be used. The best method is, I think, the application of a blister over the consolidated lung. It is the best remedy not only for the inflammation, but for the relief of the worst symptom of the disease. The very best cough-medicine, and often the only one which will accomplish the result, is a blister. We have now in our wards a case of consumption in which the cough was most troublesome for six or eight weeks, and cough-medicines of all kinds had failed; but in twenty-four hours the symptom was relieved by a blister.

These patients are always run down. Their reparative powers are poor, and it is necessary to employ the so-called supporting treatment. Every case of consumption which can bear it should take cod-liver oil. There is nothing which approaches nearer a specific remedy for this

disease than does cod-liver oil. It does good in many cases, although not all are benefited by it, and some cannot take it in any form. Where it cannot be used, cream or rich milk should be substituted for it. In addition, the patient should have the most favorable hygienic surroundings which it is possible to give him. So far as certain so-called specific remedies, such as the hypophosphites and the like, are concerned, I must say that I have never seen any benefit whatever from their use. Counter-irritation, cod-liver oil, nutritive food, and correct hygiene are the most successful remedies.

If the cough is not relieved by a blister, it may be necessary to give some form of cough-medicine. It unfortunately happens that the remedies which are useful in allaying the cough are generally those which derange the stomach. In cough-medicines for phthisis it is necessary to give opium in some form. In giving morphia for this purpose, it is often better to give one large dose than a number of smaller ones. This, however, often deranges the stomach and makes it impossible for the patient to take that nutritious food which is absolutely necessary to the cure of phthisis. Where there is a large amount of expectoration, a stimulant expectorant, as the carbonate or chloride of ammonium, should be given to aid in the bringing up of the secretion. A stimulant expectorant of great value is whiskey. A half an ounce of whiskey is often of great service in causing contraction of the muscles of the small bronchi and forcing up the expectoration. It is to be remembered that a certain amount of cough is necessary in phthisis where there is softening and accumulation in the bronchial tubes, in order that the secretion may be removed. If the patient cannot cough he will suffocate.

Another important matter, which should perhaps have preceded what I have said about the treatment of actual phthisis, is the treatment of the bronchitis which precedes the development of phthisis. I have already said that all cases of consumption are preceded by bronchitis. This bronchitis should be treated vigorously, and, if the cough continues, do not be afraid to put a blister over the lung. If these patients are carefully and actively treated, the number of cases of phthisis will, I think, be greatly diminished.

ORIGINAL COMMUNICATIONS.

THE BACILLUS TUBERCULOSIS AND THE ETIOLOGY OF TUBERCULOSIS.—IS CONSUMPTION CONTAGIOUS?

SECOND COMMUNICATION.

*Read before the Philadelphia County Medical Society,
November 14, 1883,*

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(Continued from page 345.)

II.—THE PREDISPOSITION.

HAVING shown that for the production of tuberculosis we need a special soil, and that the irritant is only of secondary significance, some inquiry into the nature of this soil is necessary.

The question of the predisposition to tuberculosis, as it stands at present, must be considered from three aspects:

1. The clinical aspect.
2. The anatomical aspect.
3. The bacteridian or parasitic aspect.

The consideration of the clinical aspect of the predisposition to tuberculosis is invaluable, as it rests mainly on actual observation, on demonstrated clinical facts, and on conclusions drawn from statistics.

From time immemorial, a clinically well-defined condition of the system, known as the strumous diathesis in its various forms, has been recognized. This condition will be considered later on.

There are a number of ailments which, from the experience of clinicians, are known to have a great, direct or indirect, influence in the development of general tuberculosis and pulmonary phthisis, or are known to create conditions of the system that predispose it to this malady. Such are syphilis, inflammation of serous membranes, bronchitis, croupous pneumonia, diabetes, the exanthemata (especially measles and typhoid fever), deformities of the skeleton, rickets, cerebral and spinal diseases of various kinds, dyspepsia, the puerperal state, uterine diseases, prolonged nursing of children, onanism, change of climate, continuous loss of sleep, distress, etc.

That exhaustion, exposure, deprivation of food, and other hardships of campaign-life, etc., are prominent etiological factors in the production of pulmonary consump-

tion is learned from the accounts of military surgeons, who observe among young, robust soldiers a remarkable increase in the morbidity and the mortality of phthisis during and immediately after the close of a war. Such observations have been made in the Franco-Prussian and Turko-Russian campaigns. The fact that consumptive soldiers are not allowed to enter upon a campaign (certainly not in Germany and Russia) excludes here the probability of contagion.

Statistics also show the remarkable prevalence of phthisis in persons of certain occupations, such as stone-cutters, miners, cigar-makers, weavers, telegraph-operators, book-keepers, and persons engaged in certain other occupations of a more or less sedentary nature. It is more natural to suppose that the disease, or the predisposition to it, is created by the character and the conditions of the occupation, than that a contagion should affect preferably shoemakers, miners, or soldiers in the battle-field. Again, in most phthisical patients the beginning of the disease can plainly be attributed to an exposure, to "a cold."

On the other hand, there are pathological conditions or diseases which appear to prevent the development of phthisis and tuberculosis in general. It is an established clinical fact that phthisis is extremely rarely, if ever, associated with mitral heart-disease; and, from my own observations, I believe that phthisis is rarely coincident with tumors. For the latter circumstance I can offer no explanation; nor is there any statement to this effect in literature. Rindfleisch has suggested that heart-disease prevents the development of phthisis by inducing repeated slow congestions of the lungs, these congestions producing an overgrowth of the muscular tissue of the bronchioles and air-vesicles, which thus gains strength for repelling the exudates following inflammation.

If tuberculosis were dependent upon a contagium for its development, neither heart-disease nor tumor-growth, nor any condition of the organism, could ever prevent its occurrence.

All the clinical facts above referred to prove definitely the necessity for a predisposition for the development of tubercular disease, and militate against the necessity of a contagium.

The anatomical aspect of the question—the morphology of the soil in which tubercle develops—is the most important aspect.

Beneke* tries to explain the disposition to tuberculosis by a disproportion between the size of the heart and blood-vessels and other organs to the bulk of the body.

Schottelius† made recently some interesting observations concerning the mode of termination of the smallest bronchioles and their relation to the lung-acini in different animals. He found that in the carnivora the entrance of the bronchioles into the acini presented very small apertures, so that the air-vesicles were not easily accessible to irritants; while in the herbivora the terminal bronchial terminations were quite wide, thus permitting the free entrance of irritants. He states that in man the bronchial terminations congenitally approach sometimes those of the carnivora, and sometimes those of the herbivora. In the latter type he believes he has found an anatomical explanation for the predisposition in some individuals to pulmonary tuberculosis.‡ Weigert, of Leipsic (one of the most enthusiastic germ-theorists), properly remarks upon the observation of Schottelius, that it does not explain the predisposition, as the same animals will react upon the introduction of the “poison of tuberculosis” into any other part of the body, where the bronchials do not come into play.

My own studies upon the minute anatomy of the tissues of man and of animals predisposed to tuberculosis extended over a large amount of material, and gave results which, to my mind, satisfactorily explained this condition. These results I announced at a meeting of this Society in October, 1882.

The anatomical peculiarity observed in either man or animals, whether inherited or acquired, I first showed to be, briefly stated, as follows: all the tissues of the body approach somewhat an embryonal type; they are peculiarly rich in nuclei and young cells, and the lymph-spaces of the connective tissues are narrower, fewer in number, and show a great many more cellular elements in the scrofulous than in

the non-scrofulous. So far, subsequent observations of others agree with mine. Objections are raised only as to the direct relation between these structural peculiarities and tuberculosis. Here I must state that I only suggested, and never asserted, the necessity of such a relation. It is quite possible that there are some other and more striking peculiarities in the morphology of scrofulous animals yet undiscovered. This much I can, however, reassert to-day: that tuberculosis usually ensues when a simple inflammation is set up by any kind of injury, in animals with the structural peculiarity which I have described; but that tuberculosis cannot be produced in animals that do not have this structural peculiarity, so far as my experiments show, unless the injury is inflicted upon serous membranes.

For the details of my researches in this direction I must refer to my first paper upon this subject.§

Koch asserts that the structural peculiarities of the tissues which I described can have no etiological relation to tuberculosis, because an animal not possessed of such tissue-peculiarity—the cat—is easily inoculable by tuberculous material. Here I must differ from Koch, as in my experience with cats this is not the case; and, again, Koch brings no proof for his assertion, and I am unaware that he or anybody else produced tuberculosis in a cat, except by inoculation into some serous cavity. That inoculations into serous membranes prove nothing for tuberculosis, as I have shown conclusively, Koch still seems to fail to see. But here is a way in which cats may become tuberculous with or without the bacillus. In one instance we kept one of the cats in a close box, *deprived* of liberty, with good air, the comforts of life, motion, and sufficient food; she also had been inoculated with diphtheritic material eight months previously, but had recovered. After the lapse of a year the cat was set free, but was accidentally killed, and was found to be affected by general tuberculosis in a high degree.

This, in my opinion, corresponds fully to the conditions in which a healthy young woman is placed, and finally becomes scrofulous, and then tuberculous, from a simple cold, after being the faithful

* Die erste Ueberwinterung in Norderney, Norden, 1882.

† Virchow's Archiv, vol. xci., 1883.

‡ The method of investigating this condition is not without interest. The vesicular structure of the lung was injected, through the bronchi, with a resinous melted mass, which, on cooling, presented moulds of the bronchioles, in connection with their characteristic infundibula and acini.

§ Phila. Med. Times, vol. xiii. p. 109.

nurse for a couple of years of a consumptive husband.

On the other hand, there is full reason to believe, as it is in accordance with experience, that young scrofulous persons, under proper conditions, may become normal individuals,—*i.e.*, may lose or outgrow the predisposition to tuberculosis. (I have dwelt upon this in my first communication on this subject.)

The scrofulous habit, and consequently also phthisis, may skip a generation, and does not invariably embrace all members of a family. It has been observed that parents may have at first healthy children without any vice, who grow up well, and subsequently the same parents, without being phthisical (but perhaps otherwise becoming deficient in health), may have other children that exhibit a full scrofulous habit. But even the reverse has been observed.

It would be highly desirable if physiologists would furnish some experimental observations on the circulation of the plasma in the lymph-spaces. This is, to my mind, a circulation or movement of vital juices in the tissues, which, for the well-being of the individual, is of importance next to that of the blood. These important channels, the lymph-spaces, are known to regulate the blood-pressure, carry and breed (white blood-corpuscles) food for the tissues, lubricate tissues, and relieve the body if any of its parts are damaged by injury of any character, of inflammatory exudates, dropsy, etc. These channels are nearly blocked up, nearly useless, in the *scrofulous*, and hence cannot perform their functions, thus modifying materially the condition and the fate of the individual in case of disease.

The term "*scrofulous*," which I retain for describing the above-stated anatomical peculiarity of animals and individuals, is as good as any other term; moreover, it is known by all as designating the "predisposition" to tuberculosis. Scrofulosis should be called a *condition*, and not a disease, as it has its hereditary and widely-distributed type (a natural one) in man, and its homologue in some normal animals (rabbit, guinea-pig, etc.). It must be remembered that the scrofulous individual acquires certain lesions, such as enlargements of lymphatic glands, cold abscesses, caries, long-standing catarrhs of various kinds, skin-eruption, and certain deformi-

ties of bones, only under the influence of injuries, or of the same agencies which in the non-scrofulous individual lead to transient and curable affections.

Virchow designates simple, permanent enlargement (hyperplasia) of lymphatic glands, with or without cheesy change, as "*scrofulous*," in contradistinction to "*tuberculous*" lymphatic glands, which contain miliary tubercle nodes (heteroplasia), and which also undergo cheesy change.

There is nothing called "*scrofulous*" or "*scrofulosis*" by some which by others is not also called "*tubercle*" or "*tuberculosis*." There are, strictly speaking, no scrofulous products, but only tuberculous products. The traditional term "*scrofulosis*" is variously used and interpreted, although it is not evident that any one means by it anything anatomically well defined.

Others take matters easier, calling everything *tuberculous* that contains tubercle-bacilli, and calling scrofulous all cheesy matters in which bacilli are absent.

There is still a third aspect of this question,—*viz.*, the parasitic or bacillary theory of the predisposition to tuberculosis. As I mentioned in the earlier part of this paper, Baumgarten, Marschant, and several others recently brought forward the view that not only tuberculosis but even the predisposition to tuberculosis is to be explained by the susceptibility of an individual to bacilli. Under this hypothesis, the inherited scrofulous tendency in individuals is created through the mediation of the bacilli. It is supposed that the bacilli or their spores may be conveyed to the ovum by the organism of the mother, or in utero by the spermatozooids of the father. Furthermore, they say, inheritance is to be explained in no other way than by a bacillary infection of the infant through the milk of the nursing mother, and by subsequent living together of children and phthisical parents. We may exclude this view altogether from consideration, as it has not been proved. Besides, it is not in accordance with facts from observation. It is as contrary to biological laws to accuse parasites of the transmission of a predisposition to tuberculosis as it would be for that of epilepsy. Hence we may dispose of this view as an unfounded, absurd hypothesis.

I am not opposed to the germ-theory of disease where it has its well-founded and proper application. Bacteridian studies

have contributed largely to our knowledge of a certain class of pathological processes and lesions. But misinterpretations of the significance of bacteria, bacillary speculations without occasion for them and without any proper application to the subject, are a check to the progress of medical science. The questions of the predisposition to, and the causation of, tuberculosis demand a great deal more of solid pathologico-anatomical and experimental studies; they can by no means be regarded as settled, and least of all through the discovery of a bacillus inhabiting necrotic tubercular tissues.

III.—TUBERCULOSIS, WITHOUT PREDISPOSITION, DUE TO INFLAMMATION OF SEROUS MEMBRANES.

For some years I have felt much interested in the question whether or not simple inflammation of serous membranes could lead to tuberculosis in the non-scrofulous, that is, in persons who have no family history of tubercular disease; and I would like to ask the opinion of the members of the Society upon this question. It is well known that there may be primary tuberculosis of serous membranes, producing secondary inflammations; and, on the other hand, tuberculosis secondary to adhesive pleurisy or peritonitis is also common in serous membranes. The general belief, however, is that whenever tubercular disease in either case occurs, if not secondary to phthisis or tubercular disease elsewhere, a strumous or scrofulous condition is required.

Traumatic injuries of joints are known to lead often to fungoid (tubercular) synovitis and general tuberculosis, occasionally in individuals with good family history. Simple injuries of the eyeball (the anterior chamber of which, as well as the joints, is lined by serous membranes), under conditions as above stated, have also been known to lead to tuberculosis, as recorded by Wolfe (*Brit. Med. Jour.*, March, 1882) and Gradenigo (*Ann. d' Oculistique*, 1870).*

* Primary tuberculosis of the uveal tract was described lately by Eparon (*Arch. d'Ophthalmol.*, November-December, 1883). He obtained his material for investigation from the clinic of Landolt. His observation was confined to those cases in which the uveal tract was primarily and exclusively the seat of a tuberculous infiltration, usually of slow progress. In one case the tuberculous infiltration was confined to the anterior part of the uveal tract, and at first so deep in the tissues as to be inaccessible to direct examination. It developed rapidly, and within a month had caused such grave alterations in the eye as to necessitate its enucleation. There was, however, no tuberculous point of infiltration in any other part of the body, and the patient was cured by the enucleation of the eye.

Dr. M. Litten,† of Berlin, was the first to publish some accounts which demonstrate that miliary tuberculosis may be caused directly and primarily by pleurisy and inflammation of other serous membranes in persons with no phthisical history, and without any cheesy masses being formed in any part of the body. In his (Litten's) experience this was particularly the case when there was a rapid reabsorption of the exudates in case of chronic pleurisy, or if repeated removal of the fluid of a hydrothorax or ascites by tapping had been performed. He records several well-studied cases of that kind, accompanied by autopsy-records. Litten's observations at no time, however, received the attention which they deserved.

Not only clinically but also pathologically this part of the tuberculosis question is rather neglected. In text-books of pathology the occurrence of primary tubercle in adhesive bands is incidentally mentioned, but no special consideration is devoted to its etiology and manifestations.

Upon the autopsy-table I have repeatedly met with subjects with exquisite primary tubercular peritonitis, pleurisy, or pericarditis, which, upon inquiry into the history of the cases, failed to reveal any phthisical or scrofulous history. The products of these inflammations were often plastic in character, not unlike those of fungoid synovitis. The appearances sometimes present themselves particularly strikingly in the peritoneum; all the viscera may be glued together by plastic material into a solid mass. The omentum is usually retracted and matted together into a solid cord or mass, which, lying parallel with the transverse colon, reaches across the abdominal cavity, and may have a thickness of from two to four inches; the mesenteric and other lymphatic glands are usually normal, but sometimes in advanced cases may be much enlarged and more or less cheesy. The entire absence of any cheesy focus in the body is, however, often a conspicuous feature in these cases.

Some pathologists deny the tubercular nature of these formations and of the flat nodular masses which cover the serous

† M. Litten, Sammlung Klin. Vorträge, No. 119: Ueber acute Miliartuberculose, 1877. For further references, see Wiener Med. Presse, No. 36, 1882; Charité Annalen, vol. vii., Berlin; Krankheiten der Respirations-Organen, in Virchow's Handb. der Spec. Path. und Ther., vol. i.; Virchow, Geschwülste, vol. ii. p. 725, etc.; also, Formad, Transactions of the Philadelphia County Medical Society, and of the Pathological Society, for 1882-83.

surfaces in these cases. It is true that fibroid changes predominate in these formations; but numerous tubercle nodules, with all the necessary attributes, epithelioid and giant cells, and necrotic changes, were plainly seen in all cases which I had occasion to examine. Secondary miliary tubercles of quite recent date are also found thickly strewn locally in these parts, and may or may not be seen in the lungs and other organs. As a rule, there is more or less ascites in these cases. My colleague, Dr. E. O. Shakespeare, has recorded similar cases, and Dr. Morris Longstreth tells me also that he has seen and studied such cases. Dr. Mitchell Prudden describes (*New York Medical Record*, June 16, 1883) an allied case.

In chronic adhesive pleurisy there occur similar primary tubercular formations in the organized plastic exudate, which in some cases give rise to secondary (miliary) tuberculosis of other organs. The lungs may be perfectly normal in all parts, and show only peripherally, just below or bordering the pleura, some indurations of gray color made up of recent tubercle tissue. These young tubercle infiltrations may in some cases be seen penetrating into the substance of the lung, as in a pleuro- or dissecting-pneumonia, directly from the old tubercular masses of the adjacent pleural membrane.

I have also examined several cases of plastic adhesive pericarditis, and found the plastic vegetations in this lesion to contain tubercles: two of these had coincident pleuritic lesions.

Cases which came under my observation during the last eighteen months—*i.e.*, since the opening of the bacillary campaign—were, of course, carefully examined for bacilli, and the results may be summarized as follows: bacilli were found in most of the lesions, if the tubercular disease of serous membranes was accompanied by cavities and cheesy masses in the lung, or by tubercular ulceration of the intestines, and if cheesy changes in general were prominent; but no bacilli could be discovered, even after repeated and careful search, in any of the lesions of four cases of primary peritoneal and pleuritic tuberculosis examined. In none of these latter four cases were there any conspicuous cheesy changes in any organ, and no cavities or marked hepatizations in the lung, and no intestinal ulcers, although in two

there was slight pulmonary miliary tuberculosis. These cases will be recorded in detail in a future publication.

I have also seen several cases of primary tubercular pleurisy and pericarditis, and a few of primary tubercular peritonitis, in the pathological institutes of Virchow in Berlin and of Von Recklinghausen in Strasburg. I questioned these foremost men of pathology concerning the etiology of these lesions. They, as well as Rindfleisch, of Würzburg, told me personally their opinion, stating their firm belief that these lesions often directly originated from simple chronic inflammatory changes, without the agency of any cheesy focus or any specific agencies whatsoever.

Birch-Hirschfeld also states, in his book on pathological anatomy (page 183), that "nearly every exudative pericarditis and pleurisy leads to a local tuberculosis, if it takes a chronic course."

How often primary tubercular lesions of serous membranes occur in non-scrofulous persons, and whether this is the only form of tuberculosis in this class of persons, is, of course, a matter of speculation, until thorough statistics and careful studies are made in this direction. Nevertheless, it is a demonstrated fact, as I will show farther on, that primary tuberculosis can be produced in the peritoneum of animals, such as the dog, which are proved not to have any scrofulous tendency. I have seen this myself, and have seen O. C. Robinson in my laboratory succeed in this experiment by the introduction of simple irritants into the peritoneal cavity. Koch also never succeeded, even with the bacillus, in producing tuberculosis in the dog, except when using the peritoneal cavity or the anterior chamber of the eye (which is also a serous sac) as a point for inoculation.

Here is room for hypothesis. I would prefer to believe that tuberculosis could occur only in scrofulous persons, as this would better agree with the *scrofulous anatomy*. It is, however, possible that a scrofulous anatomy of the tissues may be artificially established by the blocking up of the lymph-spaces of the serous membranes by fibrin and molecular *débris* suspended in the serum which is being reabsorbed. This would then be a mechanical process, and not one of infection. If an inflammation occur in serous membranes, resolution becomes difficult through the peculiarity of the exudate. This is

fibrinous mainly, and, forming extensive, usually permanent organized deposits, it impairs the function of serous surfaces quite materially: the reabsorption of new exudates is probably sometimes entirely impossible. Thus conditions may possibly be created in serous membranes, not unlike those of scrofulous tissues, and simple irritants, perhaps the fibrin, may induce in them a similar reaction.

IV.—QUESTION OF CONTAGIOUSNESS.—CLINICAL ASPECTS.

The idea of the contagiousness of tuberculosis is not new, and, like other unfounded views in medicine, it has oscillated, as all fashions will, from one extreme to another for many generations. At present it is entertained by a number of scientists and by a part of the profession. This view has called forth, from time to time, a number of researches whose results were either pro or contra. I shall refer to these subsequently.

Of late it appears that the belief in the contagiousness of tuberculosis has won considerable ground, not so much on account of accurate observation as on account of Koch's discovery of the bacillus tuberculosis.

Another element which seems to have had an influence in this direction is the fact that certain experimenters, formerly believing, from their own experiments, that tuberculosis was non-contagious, were led, later on, to change their opinions on account of the results of subsequent experiments. These later experiments will, however, be shown not to be conclusive.

Before discussing the merits of the bacillus question, I should like first to consider the question of contagiousness from clinical grounds; and should it be proved that tuberculosis is not contagious, then the necessity for a contagium surely falls to the ground.

According to the observations of the most prominent clinicians who have paid special attention to this matter, there is not on record a single authenticated case of tuberculosis as a result of contagium. Among scores of experienced men who deny thus the contagiousness of tuberculosis it is sufficient to mention the names of Virchow, Von Recklinghausen, Stricker, in Germany; Gull, William Watson, Paget, Humphrey, Richardson, in England; Bennet, in France; and Hiram Corson

and Traill Green in our own midst,—all men of close observation, with ripe experiences extending over from thirty to fifty years.

The statistics of the large Brompton Hospital for consumptives, for thirty-six years, with regard to the resident officials, compiled by Dr. F. Williams (quoted from the *Lancet*, 1883), show that of four resident medical officers, one of whom had served twenty-five years, none had any lung-disease; of six matrons, none were consumptive; of one hundred and fifty resident clinical assistants, eight became consumptive and five died, but in only one was the disease developed during residence at the hospital. Since 1867, of one hundred and one nurses, only one died from phthisis, and that after leaving the hospital. Before 1867, six died, three of these of phthisis, but only one became so whilst resident, and she had a consumptive sister. She died thirteen years after first joining the hospital, but was not there the whole time. Of thirty-two gallery-maids since 1867, none developed phthisis while at the hospital. Of twenty house-porters, five died, but none of consumption. Non-residents:—Of nine secretaries, three were threatened with lung-disease, but recovered. Of twenty-two dispensers, seven died, three of phthisis, one while at the hospital. Of four chaplains, three died, none of phthisis. Of twenty-nine physicians and assistant physicians, eight died, none of phthisis. At the Chest Hospital, Victoria Park, there have been five resident medical officers during about the last fifteen years; all are alive and well. Two matrons, neither consumptive. There were two clinical assistants appointed every three months; none known to have developed the disease at the hospital. One nurse out of fifty or sixty in the last few years became consumptive while at the hospital, and she died after a year's illness.

An ingenious plan to decide the question of the communicability of phthisis was instituted by the British Medical Association by establishing the Collective Investigation Committee. This committee sent out questions relating to this subject to all the members of the Society. Of ten hundred and twenty-eight replies received, six hundred and seventy-three negatived the idea of a contagium, while two hundred and sixty-one replies favored it. According to these statistics, there is

a manifest majority in favor of the non-contagiousness of phthisis; yet such a plan is unsatisfactory, as the answers may be of unequal value, since their worth must be estimated in proportion to the experience and authority of the sender.

Not without interest is the observation of Prof. Corradi, of Pavia, who noted that out of one hundred and thirty-three families in which he had cases of consumptives, in only twenty-five of the families were there more than one member of the family ill of that affection.

There is no proof whatever that tuberculosis is conveyed from person to person by contagion. Seeming exceptions to this assertion can almost always be accounted for in some other way.

The assertion that the wife may contract the disease from the husband, I have pointed out, in a former paper, to be untenable; and I have also shown that a predisposition to scrofulosis may be acquired from the unwholesome mode of life led, of necessity, by such individuals.

Besides, it is established statistically that nearly one-third of all deaths occurring in middle life are due to phthisis. In view of the frequency with which this malady occurs, intermarriage between scrofulous individuals may be almost as common as between non-scrofulous ones.

The view taken that children become scrofulous by contagion from phthisical parents may be met by the fact that instances have occurred where a number of young children of phthisical parents were early removed from their homes and distributed among healthy families, and yet all, sooner or later, became phthisical.

Healthy persons have even been fed on bovine tuberculous material (which is considered identical with human tuberculous material) and have thriven on it, as is proved by the interesting feeding-experiments made upon man and recorded by Schottelius (*Virchow's Archiv*, No. 91, 1883). The circumstances which led to this experiment were as follows. In Würzburg the sale of meat affected by pearl-disease, or bovine tuberculosis, is permitted, but, as some opposition to its sale once arose, a community of country-people agreed to use exclusively tuberculous meat, on account of its cheapness and in order to prove that it was harmless. From October, 1867, to November, 1868, forty-nine tuberculous beeves, with well-pronounced lesions, were

consumed by these people while they were under the supervision of the district physicians. In many instances the meat was even eaten raw, in consequence of habit. Ever since then, those people have continued the use of tuberculous meat, and thus far no bad results have been noticed: in fact, the record says that the people referred to are unusually healthy.

I wish to quote, however, some of the strongest affirmative evidence that exists in favor of the contagiousness of phthisis, in order to show upon what meagre clinical support this view is based.

The following case is related by Dr. C. Spriggs (one of the replies received by the English Collective Investigation Committee).

Miss R., aged 48, a dress-maker, living in rather a lonely cottage, had three apprentices, young girls of from 17 to 19 years, not related, from three adjoining villages, who took turns to remain in the house and sleep with her, each one week at a time. During their apprenticeship Miss R. was taken with phthisis, of which she died. In less than two years afterwards all these apprentices died of phthisis, although it is said that in the family history of each no trace of phthisis existed; and the parents, brothers, and sisters of two of them are alive and well at the present time.

Another interesting case is related by Mr. G. F. Black (English Collective Investigation Committee), in which a perfectly healthy child, with a family history free from all trace of tubercle, is reported as becoming infected by a phthisical nurse and having died with profuse hæmoptysis, after the disease had run a rapid course.

Lindemann (*Berlin. Klin. Woch.*, July 25, 1883) related two cases of tuberculosis said to have followed the rite of infantile circumcision. The operator was himself subject to tuberculosis, and both children became ill, and one of them died of tuberculosis.

Another instance is thus given (Dreschfeld, *Brit. Med. Jour.*, 1883): In a small town in Germany, where in the course of nine years only five children had died of acute tubercular meningitis, there happened in the course of nine months eleven deaths from that disease in infants all under six months. All these children were assisted into the world by a midwife who subsequently died of phthisis, and who had been in the habit, when attending a confinement, of breathing into the newborn child's lungs with the view of expanding them.

Lindemann (*Verhand. Innere Medizin, Zweiter Congress, Wiesbaden, 1883*) quotes the following:

A soldier at Strasburg was admitted into the hospital for rheumatism, and his bed was between that of two tuberculous patients. A

few months after his discharge from the hospital he began to cough. He returned to his family and was pronounced phthisical by the physician. Gradually the mother, brother, and father were affected by the disease. The father was attended by a neighbor, who was attacked and subsequently died, followed also by her husband.

Dr. Bela Cogshall, of Flint, Michigan, in a paper read before the American Public Health Association, 1882, quotes the following case after Dr. H. Weber:

A young man, with a well-established phthisical history, married four times, and lost all four wives of consumption. His first wife died after her third confinement; the second wife after a year of married life; the third wife after her second pregnancy; and the fourth wife after her first confinement. All four women are said to have come from healthy antecedents, and to have been "apparently" and "exceptionally" healthy prior to the time of marriage. Finally the much-married man died himself.

There is hardly any comment necessary. By the side of the arguments and facts advanced in this paper such and similar evidence is entirely unsatisfactory, on account of the complete absence of direct proof. On account of the isolated character of the cases and the frequency of occurrence of phthisis, there is just as much reason for inferring a coincidence as a contagium. Furthermore, there is no proof that a family history of scrofula or phthisis or some other causes had been fully eliminated in the cases referred to.*

On the other hand, daily observation and statistics show that there are thousands of instances which disprove the hypothesis of the contagiousness of phthisis. In multitudes of married couples where either the wives or the husbands died of phthisis, the surviving parties were known to have remained unaffected by the disease.

(To be concluded in next issue.)

* Since the reading and discussion of this paper, Dr. William H. Webb, of this city, has kindly sent me his monograph entitled "Is Phthisis Pulmonalis Contagious?" Philadelphia, 1878. It presents an admirable and full résumé of that part of the literature in which the so-called communicability of phthisis is favored. Dr. Webb ably advocates the view that phthisis is contagious. The most interesting passage to me in Dr. Webb's paper is a letter of Professor Alfred Stillé, who, from his clinical observation, extending over nearly fifty years, relates the following:

"I have never seen more than one case in which it appeared to me that the disease was directly communicated. This was a mother, between fifty and sixty, whose husband many years before had died of consumption. She was herself in excellent, tough health up to the date of her daughter's last illness, which was with chronic phthisis with cavities. A day before her death the daughter's breath was very offensive, and the mother, who was lifting her to change the pillows, inhaled it. She spoke to me of the foul taste and acrid

REPORT ON THE PROGRESS OF OTOTOLOGY.

BY CHARLES H. BURNETT, M.D.

PERFORATION IN THE MEMBRANA FLACCIDA, OR SHRAPNELL'S MEMBRANE.

THAT portion of the membrana tympani bounded below by the short process of the malleus and the folds of the drum-membrane, and above by the segment of Rivinus, at the inner and upper edge of that part of the tympanic bone forming the inner end of the upper wall of the external auditory canal, is known as the membrana flaccida, or the membrane of Shrapnell. It is composed of two layers only, an outer, or cutaneous layer, and an inner, or mucous layer; a fibrous layer like the middle layer of the membrana tympani below the folds is wanting in the flaccid portion, and hence one of its names. Its other name, Shrapnell's membrane, is derived from an English investigator, Henry Jones Shrapnell, who first minutely described it.

When a perforation is found in this part of the drum-head, it may be regarded as an indication that purulent disease has invaded the upper part of the tympanic cavity, in the neighborhood of the tegmen tympani and the joints of the ossicles of hearing, especially the great joint between the malleus and incus.

If this perforation be directly over the short process, it may be concluded that the pouch of Prussak has been opened; if anterior to this point, that the anterior portion of the drum-cavity has been especially involved; and if posterior to the short process of the malleus, that the region near the body of the incus, the antrum mastoideum, and even the mastoid cells themselves, may be implicated in the purulent process. These cases are nearly always attended with deafness, and, if the process in the tympanic cavity be still active, by a more or less copious discharge of an especially obstinate recurrence and fetid odor.

They present, therefore, even a grave consideration, since they indicate a purulent disease near the tegmen tympani,

sensation in her throat produced by the inhalation. Within a few weeks she began to cough, fell rapidly into consumption, and died after several months' illness. This is the only case of my own that appears to bear upon the affirmation of the question. On the other hand, if pulmonary phthisis were often conveyed by contagion, the cases ought to be of daily occurrence, since the disease is the most frequent of all mortal diseases."

and, as the latter is but a thin lamella of bone between the tympanic cavity and the brain, they lead quickly to the irresistible inference that the patient's life is in danger from an extension of inflammation to the brain, or from a brain-abscess.

There are often natural dehiscences in the tegmen tympani; and in such cases the mucous membrane of the drum-cavity and the membranes of the brain are in contact. Important as this aural affection is, very little about it is found in the text-books or in the periodical literature of otology, except that which has appeared within the last ten years in this country.*

This apparently has incited at least two observers† in Germany to report their observations on perforation of the membrana flaccida, and to communicate their ideas at the same time upon the pathology and treatment of this most important and not very rare disease.

One of the chief characteristics of a perforation in this part of the membrane is that air cannot be forced through it by any form of inflation. Morpurgo, in his article, tries to prove that air will pass through a perforation in the posterior part of this membrane when the tympanic cavity is inflated. But he apparently forgets that his experiment was performed on a healthy membrana flaccida artificially perforated, and not upon one already perforated by disease. In the latter case, it must still be maintained that the antecedent disease in the mucous membrane would so greatly swell the latter as to preclude the occurrence of a perforation-whistle, through the pathological perforation, by any form of inflation of the drum-cavity.

Again, this author maintains that the removal by irrigation of fetid, cheesy masses through a perforation in the membrana flaccida is a proof that the masses have come from the mastoid region. This cannot be accepted as a conclusive argument, because great masses may be removed from the diseased dome of the tympanic cavity underneath the tegmen tympani, as I have seen in two cases, without involvement of the mastoid cells.

In these cases the differential diagnosis between a morbid process limited to the upper part of the tympanic cavity, and a general one throughout the entire cavity, is aided by the appearance of the drum-membrane.

If in a case of chronic, copious otorrhœa, where a perforation in the membrana flaccida is found, the membrana tympani *in toto* is found to be swollen and red, and the malleus more or less obliterated from view, it may be concluded with considerable certainty that the inflammatory process is general throughout the cavity of the tympanum. In some instances the drum-membrane below the folds, *i.e.*, the drum-membrane proper, bulges as a whole, or at some point, and pressure upon it causes pus to ooze from the perforation in the membrana flaccida. The latter result is proof positive that matter has passed below the perforation, and has sought the lower parts of the tympanic cavity, or, as I believe, may have formed a pouch between the layers of the membrana tympani. If, on the other hand, the inflammatory changes are found only in the region of the perforated membrana flaccida, the rest of the membrana tympani remaining unaltered, that is, not greatly sunken, and with the manubrium of the malleus very prominent, and if no communication between the perforation and the tympanic cavity can be shown by inflation of air, it may be concluded that the process is localized very near the perforation in the upper part of the tympanic cavity.

If, however, the membrana tympani be retracted and possessed of limited mobility, and if there be no perforation-whistle, it may be fairly assumed that a wide-spread process has been present in the drum, but that it has run its course, leaving behind it more or less important changes, and is at last limited to the upper part of the drum-cavity.

In Hessler's article, based on an observation and report of ten cases, great stress is laid on the frequent occurrence of this form of ear-disease in children, and he reports two cases,—one in a child 4 years old, the other in a child of 6½ years,—the youngest cases yet reported. He believes that most cases of perforation in the membrana flaccida date from the earliest childhood. This is not an invariable rule, as I have now under observation a case of this form of ear-disease in a man 25 years old,

* J. Orne Green, Boston Med. and Surg. Journal, March 26, 1874; C. J. Blake, Amer. Otol. Soc., 1874; C. H. Burnett, 1877, Treatise on the Ear; H. G. Miller, Amer. Otol. Soc., 1878; A. H. Buck, Treatise on Diseases of the Ear, 1880; C. H. Burnett, Amer. Journal of Otology, 1881.

† Beitrag zur Pathologie und Therapie der Perforationen der Shrapnel'schen Membran, E. Morpurgo, of Trieste, Archiv f. Ohrenheilkunde, vol. xix, p. 264, 15th March, 1883, and a paper with the same title, by Hessler, Ibid., Bd. xx, p. 121, 8th August, 1883.

whose ear I examined ten years ago for another purpose, and at that time there was no perforation in the *membrana flaccida*, nor any symptoms of purulent disease in the drum-cavity. Hessler regards this form of aural disease as not uncommon, and gives as his experience that it is found in one per cent. of all cases of ear-disease treated. If this be a fact, it is strange that so few reports of cases are found in otological literature. Twelve years ago, Prof. Politzer, of Vienna, informed your reporter that he had seen only a few cases of this form of perforation of the drum-membrane. In his recently-published work on the ear he states that it is of comparatively rare occurrence, but that it does occur more frequently than was once supposed.

Hessler found that a communication existed between the Eustachian tube and the purulent nidus in the tympanic cavity in two cases, as was shown by the whistling of air through the perforation when air was blown into the drum-cavity through the Eustachian tube. Deafness is usually a prominent symptom of this form of ear-disease, but not always.

Treatment.—The first consideration in the treatment of this disease is that it cannot be intrusted to the patient, as nothing he can do through the external ear can reach the diseased spot behind the perforation, the latter being too small to admit drops instilled into the external canal. Furthermore, the diseased cavity behind the perforation is packed with purulent *débris*, which in every instance must be removed before drops or applications of any kind can be put into the cavity so as to medicate the diseased mucous surfaces.

At the head of the list of remedies in this malady stands boric acid,—most efficient in acute forms, but very valuable in the chronic conditions. The chief consideration in the use of any drug is the mode of its conveyance to the diseased cavity. The best method is undoubtedly by means of the tympanal syringe. Morpurgo holds that the best fluid for injecting is a saturated solution of boric acid. In those cases in which the odor is very bad, he resorts to a solution of carbolic acid. The long, slender nozzle of the syringe, filled with the solution to be applied, must be conveyed down the canal under good illumination of the parts by the forehead-

mirror, and with the tip of the nozzle inserted into the perforation an injection may be made. This, of course, must be done at first with the gentlest pressure, or vertigo will ensue. Caustics are not to be used as injections. The best results have been obtained by Morpurgo from the use of disinfectant fluids, combined with the use of alcohol and water in equal parts, after the cavity has been cleansed by the disinfectant. The use of the latter alone may effect a cure. Combined with this treatment at the hands of the physician, the application of alcohol and water in equal parts, or even pure alcohol, to the ear, by instillation, may be carried out at home by the patient.

EPILEPSY CAUSED BY A FOREIGN BODY IN THE EAR.

Dr. Küpper,* of Elberfeld, in Germany, relates an interesting case, as follows. Maria B., 18 years old, came under observation in September, 1881. She stated that about six weeks previous she felt intense pain in her right ear, which had come on without any assignable reason, and had lasted several days, until copious suppuration ensued. About three weeks previous to her admission to the hospital, where she made these statements, she experienced a severe toothache after exposure to cold weather, and for the cure of the pain had, at the advice of a female friend, placed a piece of some kind of root in her ear to cure the pain in her tooth. She was, however, unable to extricate this substance from her ear, and had commenced from that time to show epileptic symptoms. Sometimes every day, and even several times in the same day, with intervals again of several days, she would fall with a scream upon the floor, lose her consciousness, and finally come to herself quite exhausted. Her mother stated that when her daughter was in these fits it required several people to hold her.

Examination of the case revealed that the watch was heard only on contact in the affected ear, bone-conduction was normal, and the external soft parts of the ear were neither red nor swollen. The parts in front of the external auditory canal were very sensitive to pressure, and the auditory canal was full of pus.

* Archiv f. Ohrenheilkunde, Bd. xx. p. 167, 12th December, 1883.

Syringing the ear was followed by vomiting and intense vertigo, so that the patient nearly fell from the chair. The auditory canal was occluded by polypi, which were very sensitive to the touch. Upon one occasion Dr. Küpper had an opportunity of observing the girl in one of these epileptic fits, and of satisfying himself of the insensibility of the pupils. The next morning the patient was etherized and the polypi extracted. Copious hemorrhage ensued, and treatment was suspended. That afternoon the patient had a severe fit, and, as the parts about the ear were very sensitive, three leeches were placed in front of the external meatus. A day or two later the clots of blood were removed by syringing, when in the fundus of the canal a black object was seen. Since syringing could not remove this, and as touching it produced great pain, the patient was again put under the influence of an anæsthetic. By means of a small hook this substance was removed, and it proved to be a piece of wood one centimetre long and one-half centimetre thick. After the removal of this foreign body and the polypi, there occurred two more fits, the first a few hours after the last operation, and the other, two days thereafter. The remnants of the polypi were cauterized with nitrate of silver, and the suppuration in the middle ear was treated by means of a solution of nitrate of silver, and by boric acid powder. In four weeks the patient was cured, the otorrhœa ceased, the perforation in the drum-membrane cicatrized, and the hearing ultimately became normal, as was determined by Dr. Küpper in March, 1883.

CEREBRAL IRRITATION FROM A MASS OF EPIDERMIS IMPACTED IN THE AUDITORY CANAL.

Dr. Küpper* reports in the same paper another case of neurotic irritation from aural lesion. It appears from this account that Miss S., 76 years old, was suddenly attacked in September, 1882, with symptoms of cerebral irritation, without any known cause. She suffered from intense headache and vertigo, vomiting, spasms of the facial muscles and in the muscles of the extremities, those of the trunk being but slightly implicated. Her temperature was normal, pulse 76. The patient com-

plained especially of pain in her right ear, which was very sensitive to the least touch. Examination of the various organs of the decrepit woman revealed them to be in a healthy condition, except the right ear, which was entirely stopped up. The hearing in her left ear was nearly normal, but the right ear was absolutely deaf, and bone-conduction failed. It could not be found out how long the right ear had ceased to act normally. An attempt to remove the plug from the auditory canal by syringing produced vertigo, vomiting, and a severe spasm. Instruments could remove only shreds of the obstructing mass, and hence endeavors were instantly made to soften it. In the course of the same day and night there were frequent attacks of vertigo and spasm, and no nourishment could be retained, by reason of the tendency to vomit. The next morning careful syringing failed to remove anything more than small pieces of the obstructing mass. The latter appeared to cling firmly to the wall of the auditory canal at all points.

Gradually some flakes of the epithelial plug were removed by instruments, and the nervous phenomena diminished in intensity. The fits ceased entirely, and the vomiting became so much less as to permit the retention of food, and the vertigo vanished. The next day the entire obstructive mass was removed. The membrana tympani was found pressed inward against the inner wall of the drum-cavity; it was white and opaque, thick and lustreless. The mass removed from the ear was shining, and of a silver-gray color, and resembled in shape a cast of the external auditory canal. Especially well marked was the impression on its inner end of the form of the membrana tympani. The external auditory canal was considerably wider than the left, and the membrana tympani was adherent to the inner wall of the tympanic cavity. The hearing was destroyed. Examination of the plug removed from the auditory canal showed that it was laminated in structure on the outer surfaces, the laminæ being composed of epithelium without trabecular substance. There were no cholesterine crystals found. The central parts of the plug consisted of ordinary cerumen. The patient slowly regained the ability to walk about. No change occurred in the hearing or in the appearance of the drum-membrane.

* Op. cit., p. 169.

THREE CASES OF EMPYEMA, SHOWING THE ADVANTAGE OF INCISION AND DRAINAGE.

BY V. M. REICHARD, M.D.,

Fair Play, Maryland.

THE accompanying cases occurred in the practice of my friend and former preceptor, J. McPherson Scott, M.D., of Hagerstown, Maryland, by whose kind permission I am allowed to report them. The following abstracts are taken from his case-book:

Case I.—L. E., female, white, æt. 6 years, came under observation in May, 1880, suffering with pleurisy with effusion. Had been under the care of another physician, hence knew nothing of the earlier history. Put on quinine, iron, and cod-liver oil, with nourishing diet. In about a week began to have hectic fever, with rigors and sweats. Suspecting an empyema, passed the needle of a hypodermic syringe and drew away pus. Decided bulging of intercostal spaces, but no pointing. Next day passed a good-sized trocar between tenth and eleventh ribs posteriorly, and drew away about a pint of pus, somewhat to the relief of the child. Inserted a drainage-tube, but it became clogged, and had to take it out. The opening closed. In about a week was as bad as ever. After local anæsthesia, made an incision down into the pleural sac and let out about three pints of pus. The opening was kept patulous with a tent. The discharge continued in diminishing quantity for about two months, when it ceased entirely, and the opening was allowed to close. The child began to improve after the free incision, and now is stout and hearty.

Case II.—B. S., male, colored, æt. 20. In June, 1881, seized with pleurisy with effusion. In about a week began to have rigors and sweats. Passed hypodermic needle and drew away pus. Next day aspirated, and nearly a gallon of offensive pus withdrawn. In about ten days the chest had refilled. Aspirated again, but, owing to defective working of the apparatus, did not succeed well; only about a quart withdrawn. Rigors and sweats continued. In a short time the effusion was so great as seriously to impede respiration. The pleural sac was now freely laid open by incision between tenth and eleventh ribs. A large amount of pus came away. A discharge kept up constantly for several months, though in slightly-diminishing quantity. The case then passed from under observation for about six months. When seen again, the opening had closed; the boy was in the last stage of consumption, and died in a few days.

Case III.—J. W., male, white, æt. 35. In 1872 was called to see him. Was suffering with an empyema. Had had a pleurisy, and an empyema necessitatis formed. A surgeon

had made an opening on lower and posterior aspect of thorax, but failed to get any pus; said it would come all right. Found him with greatly-impeded respiration and suffering very much. He declined any further operative interference. Having no aspirator at hand, took a piece of rubber tubing and fitted it to a barrel syringe. Passed the tubing down into the pus-cavity, and in this way drew away several pints of pus, affording great and instant relief. He was soon about again. Urged an operation, which he declined, saying he would "stick to the first apparatus." A discharge, never very profuse, was constantly kept up. When there was trouble in breathing, we resorted to the syringe and tubing. In 1880 he had a hemorrhage into the pus-cavity. Was relieved by passing catheter and washing it out. The washing would relieve the discharge, but not cure it. Tubercles now began to develop in the lungs. In the spring of 1881 had another hemorrhage into the sac. In December, 1881, died of phthisis pulmonalis.

These cases present some points for study. They show that the best chance for recovery is after free incision. Whether the case be one of suppurative pleurisy or one in which a serous effusion has become purulent, the indication is the same,—free incision. The pleural sac is simply a pus-cavity, and must be treated as such. In Case I. improvement began as soon as free drainage was established. The child is now robust, with very little retraction of the chest-wall. In Case II. aspiration was given a fair chance, but failed entirely. It is a fact observed by all who have had much experience with negroes that thoracic diseases are badly borne by them. Under the continued drain, tubercles developed, and he died with acute consumption, although the empyema was almost cured.

Case III. is another against aspiration. Though the pleural sac was often emptied and washed out, drainage was never fairly established, and at last the system succumbed to the purulent secretion,—only, however, after the lapse of nine years. Had an incision been made through the chest-wall, and this pus-cavity been treated as one in any other part of the body, the result might have been different.

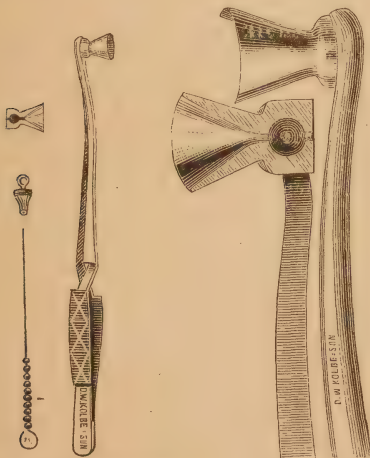
It is of the first importance that the incision be made into the lowest part of the sac. In some subjects it is not an easy matter to find the lowest ribs. In such cases a good plan would be to aspirate with the hypodermic syringe. Even if the needle were passed below the diaphragm, no harm would result.

AN INSTRUMENT FOR PLACING SHOT UPON WIRE SUTURES.

BY THOMAS S. K. MORTON, M.D.

HAVING noticed the frequent annoyance, inconvenience, and delay of operators in using the shotted-wire suture from the shot slipping from either their fingers or those of an assistant, and the difficulty of getting the ends of the wire through the perforation, or, after coaxing the wires into it, of finding this perforation incomplete, to obviate these difficulties I have devised the instrument which is shown in the accompanying wood-cuts, and which my father and others have been using of late with much satisfaction.

It consists of a hollow metal cone, one-half inch diameter at base, and one-half inch in height, having at its apex a perforation (sufficiently large to admit two strands of any wire likely to be used) which opens into a chamber the exact size of the shot intended for use. Directly opposite this entering opening is another, slightly conical, communicating with the exterior, the apex being its outer termination. The whole is split into two symmetrical halves, and each mounted obliquely to its axis and vertical to its section on one arm of a pair of crossing forceps.



Instrument and loading-pin.
(One-fourth actual size.)

Actual size.
(Open.)

Then, having a number of shot, which must be bored and punched to secure uniformity, strung on the pin provided for the purpose (see cut), the arms of the forceps are opened, a shot is placed in one of the separated halves of the shot-cham-

ber, and the forceps allowed to close, thus embracing the shot and pin, which latter is now drawn out and the instrument is ready to be presented to the ends of the wire, which pass along the cone, through the shot, and out behind.

When the arms are again separated, the shot is upon the wires, ready to be run down and compressed; an assistant in the mean time places another shot in the chamber, ready for the next stitch.

Chief among the advantages of this instrument may be mentioned: the shot require no handling, and after loading cannot be dropped or mislaid, and, being bored, must be pervious; also shot with a finer perforation can be used, and thus a small shot be equal in strength to a much larger one as now used: the wires do not require to be twisted and cut, and if the ends presented to the cone are not more than one-half inch apart, they are bound to pass through the shot; the fingers do not obstruct the view, and if a known number of shot be upon the pin at the beginning of the operation, the number of sutures put in can be ascertained by the number missing.

TRANSLATIONS.

A CASE OF GASTRIC FISTULA WITH DIGESTIVE EXPERIMENTS.—Dr. De Cernville reports (*Revue Médicale de la Suisse Romande*, January 15) a case of gastric fistula, and Prof. Herzen communicates in the same article some physiological observations made upon the patient. A vine-dresser, 28 years of age, of intemperate habits, and a confirmed dyspeptic, was found to be suffering from fibrous thickening and contraction of the cardiac orifice of the stomach, with dilatation of the œsophagus. As the stricture appeared impassable, it was decided to perform gastrostomy. The incision was made parallel with the costal cartilages on the left side, and was about five centimetres in length. The muscles and aponeuroses having been cut through, the peritoneum was then incised, and the adjacent wall of the stomach was fastened to the edges of the wound by a circle of sutures of catgut and of metal, passing through the stomach, peritoneum, and integuments, and the wound was covered by a Lister dressing. The patient was nourished by enemata contain-

ing raw meat and pepsin, and did very well after the operation. On the second day, the portion of the stomach comprised between the ligatures was incised without difficulty, and without pain or notable hemorrhage. Into the stomach a tube was inserted, and a quarter of a pint of broth was introduced; in the evening half a pint was given. Subsequently he was fed regularly with milk and broth, and cure was rapid; the sutures were removed on the eighth day, when the adhesion seemed perfect and sufficiently solid. It was found that a tube (such as is used for dogs) could not be used, as part of the gastric juice escaped by the side of the canula and caused excoriations, due to digestive action upon the skin. The best method of closing the wound was a tampon of wadding, covered by a concave plate, and held in position by a girdle. All efforts at dilatation of the cardiac orifice failed.

In the course of his investigations, Prof. Herzen discovered some interesting facts. Each morning, after fasting for twelve to fourteen hours, it was found that the stomach contained from two hundred to three hundred centimetres of an acid liquid, evidently stained with bile. This had a feeble digestive power. On two occasions experiments showed that it contained no pepsin. After this fluid was removed from the stomach, another liquid took its place, a liquid absolutely colorless, limpid, extremely thick, ropy, something like the white of an egg. In quantity it was less than the preceding, but its digestive action upon albuminoids was much more active, although still not so much as the normal gastric juice poured out during digestion. Remnants of food were detected in the stomach after a slight repast for at least six hours, but they completely disappeared in twelve hours. It was noticed that hunger began some time before the stomach was entirely empty of food. It was remarked with regard to the first (or bile-stained) fluid found in the stomach, that it disappeared into the duodenum very shortly after applying any irritant to the fistule, but that if the bandage were allowed to remain undisturbed the fluid would remain indefinitely. The fact that the gastric juice in the morning is deficient in pepsin should lead to some correction of diet: for instance, hard-boiled eggs eaten by themselves were found to give indigestion, but by using with them

a peptogenic fluid, such as a solution of dextrine or a cup of broth, the discomfort was avoided.

THE MODE OF PRODUCTION OF THE TENDON REFLEX.—Jendrassik has made a number of experimental studies of the various conditions which are necessary for the presence or absence of tendon reflexes, particularly for the patellar reflex. The following conclusions express the most important of his results:

1st. The "knee phenomenon" is a true reflex action, brought about by the mechanical irritation of the nerves situated in the patellar tendon. It is not necessary that the stimulus should be applied at the junction of muscle and tendon: stimulation of the part of the tendon lying farthest from the muscle is equally efficacious.

2d. For the production of the reflex muscular contraction it is necessary that the muscle be passively extended: to a certain degree the contraction of the muscle is proportional to the stretching to which it is subjected.

3d. Voluntary innervation of the crural nerve diminishes the patellar reflex, or may prevent its appearance altogether. Contraction of the muscles innervated by the sciatic nerve, however, instead of preventing rather favors the development of the patellar reflex.

4th. The path of the reflexes lies in the spinal cord only in the gray matter. Lesion of the white columns cannot directly be a cause of the absence of the reflex.

5th. Physiological increase of the tendon reflex is also produced by contraction of the other body-muscles: thus, simultaneous lifting of weights, or strong stretching of muscles, increases the reflex.

6th. In the majority of cases pathological increase of the patellar reflex may be regarded as the result of an interruption of the conduction of inhibitory impulses from the brain to the spinal cord.

7th. The author does not regard the "foot phenomenon" as a reflex, but rather as a tonic contraction, directly produced through the mechanical stimulus given in the sudden stretching of the soleus: the irritability of the muscle must therefore be increased.

In five instances severe stretching of the crural nerve in rabbits left the patellar reflex unaltered.—*Centralb. für die Med. Wissen.*, No. 49, 1883. S.

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EDITORIAL.

NEW YORK STATE MEDICAL
SOCIETIES.

THE County Societies of New York State have been requested to send delegates to form a New State Medical Society in New York in November next. The establishment of a second New York State Medical Society seems an actual necessity, from the persistent spirit of opposition to the American Medical Association shown by the leaders of the dominant faction in the old State society, which deliberately forfeited its right to representation in the National Association. From remarks made during the discussion of the subject, it would almost seem that the object of the great revolt, after all, was not so much to get rid of the old Code of Ethics as it was to "shake off the shackles" of the national organization, as it was elegantly and forcibly expressed by a prominent ear specialist of New York, who declared his belief that other State Medical Societies would soon be found to follow the example. We are at a loss to understand why the yoke of the American Medical Association should suddenly have become so galling. As an "annual picnic" and a "junketing association," a representative body without corporate existence, and deriving its authority solely from the delegates in attendance at the meetings once a year, it certainly could not greatly interfere with New York physicians. Is their course to be explained on the theory that they had decided upon doing what they knew could not be approved by their medical brethren throughout the country, and they therefore attempted to escape censure by breaking

their part of the contract made upon entering the national organization, and dishonoring their pledges to support its laws?

PHYSICIANS' ACCOUNTS.

PHYSICIANS generally are not credited with being very good business men, and in case of death their heirs often suffer loss on account of the difficulty experienced by the executors in deciphering their books. It sometimes happens that the physician is so busy with his engagements that he postpones his clerical work and neglects entering his charges for weeks at a time, keeping his memoranda upon loose slips of paper which are easily lost or mislaid. No better illustration could be given of the truth that delays are dangerous. With regard to the manner in which his books should be kept in order to make them books of original entry which may be introduced as evidence in court to defend a claim, an important decision has just been rendered. Judge Ashman, of the Orphans' Court (December term), in giving an opinion upon a medical account, declared that "if the books are so kept as to cover a daily entry of each visit, with the name of each patient, a list of the medicines furnished, and the price which custom has fixed for the particular service, such a record will comprise all the incidents of certainty of time, person, labor, and value, and each entry will be complete in itself." He also declared that the ordinary diary or visiting list, in which the records are kept with signs or hieroglyphics, instead of amounts, "could serve at best only as memoranda from which to make more formal charges;" such accounts could not serve as original entries in order to prove services rendered, in a court of law.

It is also well to remind physicians that, in making out accounts, a visit *per se* cannot be considered as a proper ground for a charge: the account should be made

out for services rendered at the request of the patient or of the person responsible for the account.

RESULTS OF RESECTION OF THE KNEE-JOINT AS AFFECTED BY AFTER-TREATMENT.

IN scarcely any department of surgery are the advantages of modern methods more evident than in the operations upon joints. Dr. J. Mensing has recently published* an analysis of ninety-two cases of resection of the knee-joint performed between the years 1857 and 1883 in the clinic at Kiel, dividing the cases, for the sake of comparison, into three classes. In the first class fall all the cases operated on before the introduction of Lister's method of dressing and Esmarch's bandage; in the second group are the cases treated by these methods; and in the third class are the cases in which Neuber's permanent dressing was used in the after-treatment.

Regarding the cases, first, as a whole, there were eighty total and three partial resections for chronic fungoid inflammation of the knee-joint, and nine cases of wedge-shaped excisions to overcome deformity resulting from this disease. In fifty-one cases the joint-affection originated in the synovia, in sixteen cases in the bone, and extended to the joint; in the remainder of the cases no note is made in reference to this point.

Forty-eight of the operations (52.1 per cent.) resulted in cure; of these the operation was performed for primary synovial gonitis in thirty-three, for primary osteal gonitis in six, and for ankylosis in seven. The subsequent histories of thirty-two of these cases were followed up, with the result that in most of the cases the leg remained extended and useful, while in three cases moderately marked flexion occurred; in two cases the disease returned,

in one to be treated by a second successful resection, and in the other by amputation.

Of thirty-four cases, twenty left the hospital while a fistula remained, and secondary amputation had to be performed in fourteen. Of those leaving before the cure of the fistula, it was subsequently learned that in ten perfect healing resulted, and in two cases death, in one case from amputation of the thigh, and in the other from secondary resection, while still another case at the time of the report was suffering from albuminuria. Of the fourteen instances in which secondary amputation was performed in the hospital, twelve were completely successful, one died from septicæmia, and one left the hospital with a fistula and died from phthisis six months later.

Of the ten cases in which death resulted directly from the resection, five were from pyæmia, one from Bright's disease, one from miliary tubercle, two from exhaustion, and one (a bleeder) from uncontrollable hemorrhage.

The comparison of the results obtained in the three different periods before alluded to is very instructive:

Period.	Number of cases.	Cured.	Not Cured.	Died.
I.....	21	5 = 23.8%	9 = 42.9%	7 = 33.3%
II.....	23	7 = 30.4%	14 = 60.9%	2 = 8.7%
III.....	48	36 = 75. %	11 = 23. %	1 = 2. %

The solitary case of death in the third period was that of a bleeder, who died from hemorrhage six days after the resection and two days after the secondary amputation of the thigh.

Another very great advantage of the permanent dressing is that it reduces the duration of treatment from one hundred and twenty-nine days, the average in the first two periods, to eighty-nine days.

THE ETIOLOGY OF PHTHISIS.—The fact of the question as to the pathological relations of phthisis and bacilli occupying so

* Centralb. für Chirurgie, December 8, 1883.

great a share of scientific attention at the present time must be our excuse for devoting so much space to this subject in the present issue. The next number will show the usual variety of topics.

NOTES FROM SPECIAL CORRESPONDENTS.

SIAM.

MR. EDITOR,—The following notes of native practice of medicine are thought to be of sufficient interest to warrant publication.

A NOVEL EMETIC.

Not very long ago, a young Siamese lady, wishing to put an end to her existence, swallowed a large quantity of opium. Mustard, warm water, and various emetics were tried, without avail. Finally the old Siamese doctor procured an eel, clipped off the end of his tail to make him squirm in a lively manner, then poked the slimy fellow, tail first, down the dusky maiden's oesophagus. Emesis was produced immediately, and the rash one's life was saved by an eel.

A NEW REMEDY FOR SNAKE-BITE.

Several months ago, a Siamese man was bitten on the toe by a small snake which the natives regard as a deadly variety. A common barnyard fowl was quickly found, and the injured toe was inserted in the cloaca without delay. The poison was rapidly absorbed by this intestinal pouch, and the hen died, apparently from the effects of the same, in a few minutes, while the man did not suffer at all from the effects of the bite. This seems to me to be worthy of further experiment.

A NEW REMEDY FOR ASTHMA.

One sultry day during the rainy season, an asthmatic old man came panting up my steps, breathing with the greatest difficulty. He rested a few moments, and then asked, in the gravest manner possible, if I had any tigress's milk. He seemed much disappointed when answered in the negative. His Siamese doctor had assured him that this article would prove an infallible remedy in his case. He refused other medicine, and went sorrowfully away.

SIAMESE REMEDY FOR RINGWORM.

I have just noticed Tong-Pang-Chang, an Indian remedy for ringworm, advertised in one of the London papers. Tong-Pang-Chang is a Siamese name, meaning a thousand catties of gold. The preparation advertised is a tincture made from the roots of the

Rhinacanthus communis. This plant grows here like a weed. By taking the fresh roots and bruising them well, and allowing them to remain in alcohol forty-eight hours and filtering, we obtain a beautiful claret-colored tincture. This remedy I have used in hundreds of cases, always with the best results.

E. A. STURGE,

Medical Missionary.

PETCHABURI, SIAM, December 6, 1883.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 24, 1884.

The Vice-President, Dr. E. O. SHAKESPEARE, in the chair.

General tuberculosis of serous membranes.
Exhibited by Dr. W. E. HUGHES.

CAROLINE K., white, æt. 17, was admitted to the University Hospital November 3, 1882. There was a history of articular rheumatism in father and mother. The family was free from consumption. She herself had been perfectly well till eight months previous, when she developed symptoms of acute pleurisy. The acute symptoms subsided after a few days, and, with the exception of slight dyspnoea and hacking cough, she soon felt as well as before. Two months afterwards she had pain, swelling, and redness, involving successively all the large joints of the body, lasting ten weeks, and disappearing completely. From the outset of the articular affection her strength and flesh failed steadily, appetite grew poor, and digestion defective. Both dyspnoea and cough increased slightly. Five weeks before admission she began to have occasional sharp pains through the abdomen, and noticed that the abdomen was gradually enlarging. When first examined, she was pale, somewhat emaciated, and had hacking cough with mucous expectoration, slight, constant dyspnoea, very little increased on exertion. The right pleural cavity was filled with fluid up to the third rib; the abdomen much distended with fluid, free to move. The heart was normal in size, but there was a strong mitral systolic murmur. She had an irregular hectic fever. Under treatment the pleural effusion rapidly subsided, but that of the abdomen less rapidly. One month after admission, symptoms of meningitis developed, and examination of the eye-ground showed descending neuritis. A week afterwards, a double pericardial friction-sound developed over the sternum opposite the third intercostal space. She died December 16.

Autopsy, seven hours after death.—Thorax,—right pleural cavity completely obliterated by organized plastic adhesions. In the ad-

hesions numerous gray miliary tubercles were found. Right lung congested, compressed, and contained scattered miliary tubercles. Left lung contained a few miliary tubercles; pleura normal. Heart normal in size. Marked thickening of mitral leaflets, with incompetency. In the pericardium, at upper part of anterior surface of left auricle and over base of aorta, were a few small grayish granulations, apparently tubercular. Peritoneal cavity contained about two quarts of straw-colored serum. Peritoneum everywhere thickly studded with gray miliary tubercles. Old peritoneal adhesions in several parts of abdomen, notably in left lumbar region and around pancreas. These old adhesions were filled with miliary tubercles. Lymphatic glands moderately enlarged, not cheesy. Numerous gray miliary tubercles in membranes of base of brain, especially in Sylvian fissure. No tubercles in any organs except the lungs.

Tubercular ulcers of intestines, with perforation. Exhibited by Dr. W. E. HUGHES.

William T., white, æt. 30, was admitted to the University Hospital April 16, 1883. His mother and a sister died of phthisis. He always took cold easily, and was never strong. Two years ago, after lifting a heavy weight, he had several slight pulmonary hemorrhages. At that time he had no cough. Four months before admission he took a heavy cold. From that time up to his admission he had a dry, hacking cough, with mucous expectoration, some dyspnoea, pleuritic pains on the right side, and a few small hemorrhages. He lost twenty pounds. On admission, there was in the lower part of the right pleural cavity an effusion localized in the posterior half. Over the right lung the respiration was somewhat roughened, with an occasional bronchitic rhonchus. The left lung was normal. Under treatment the effusion subsided, but consolidation commenced at the apex of the right lung. The consolidation went on to breaking down, and the same process commenced at the left apex. He gradually failed, with the usual phthisical history. One month before death uncontrollable diarrhoea developed, with severe colicky pains and intense tenderness throughout the abdomen. He died December 26, of gradually increasing asthenia.

Autopsy, three hours after death.—Great emaciation. The right pleural cavity was completely obliterated by firm old adhesions. In the left there were some adhesions at the apex; no fluid. The right lung had numerous small cavities in the apex. The lower two lobes were riddled with miliary tubercles and small cheesy masses. The left lung was, at the apex, indurated with tubercular and cheesy deposits. In all other parts it was healthy. Bronchial glands were enlarged. The heart weighed four and one-half ounces. The aorta was slightly atheromatous. The

liver weighed two and one-half pounds, and was somewhat nutmeg-like in appearance. The spleen weighed two and two-thirds ounces. The kidneys were normal in size and appearance. The intestines were everywhere adherent to each other and to the abdominal wall, and scattered through the adhesions and over the peritoneum were a few miliary tubercles. The small intestine contained tubercular ulcers strung along its length from the lower part of the duodenum to the ileo-cæcal valve. They were about as numerous in the upper part of the intestine as in the lower. Several of these ulcers had perforated the peritoneal coat; but the contents of the intestines were prevented from exuding into the abdominal cavity by adhesions which had formed around the perforations to the neighboring peritoneal surfaces. There were a few tubercular ulcers in the colon. The mesenteric glands were enormously enlarged.

Phthisis following empyema; amyloid kidneys; cancer of uterus. Exhibited by Dr. W. E. HUGHES.

Amanda F., white, æt. 38, was admitted to the University Hospital for cancer of the uterus. She had been a serving-woman, and had been much exposed to draughts. Her mother died of cancer of the uterus. There was no phthisical family history. One of her children died of tubercular meningitis. While in the hospital she complained of pulmonary symptoms, and physical examination of her lungs showed on the left, posteriorly, flatness down to midway between the spine and the angle of the scapula, with blowing breathing and gurgling râles; anteriorly, tympany, with metallic, cavernous breathing; at the base a small amount of fluid free to move. On the right, hyper-resonance, with exaggerated breathing, and at the apex moist râles. Her general condition was much below par. She had a troublesome loose cough, with free muco-purulent expectoration, and pleuritic pains through both sides of her chest. Five and a half years before, she had taken a severe cold, from which she dated all her trouble. With the cold there had been severe pleuritic pain in the left side, some dyspnoea, and slight muco-purulent expectoration, occasionally streaked with blood. In a month she had lost twenty pounds. Afterwards the acute symptoms disappeared, the pain grew less severe, the cough looser, and the expectoration quite profuse. She slowly lost ground till about a year before, when, after a succession of heavy colds, her condition deteriorated more rapidly. There was more dyspnoea, more cough, and an occasional rise of temperature preceded by chilliness. During this year she had several pulmonary hemorrhages. For a month the frequency of micturition had been much increased, but the urine contained no albumen, though the quantity was increased and the specific gravity

somewhat lowered. The first symptoms of cancer of the uterus had appeared about seven months before. For more than a month after admission she improved; then, a day after a rather profuse pulmonary hemorrhage, she developed a typical uræmic condition. The urine was very scanty and loaded with albumen, but contained neither tube-casts nor blood. The uræmic condition disappeared after two days, and the urine increased to its former quantity, all but a trace of the albumen disappearing. Two weeks after this, for the first time, a few waxy and epithelial casts were found in the urine. From this time on, the quantity of urine passed daily varied from fifty to seventy ounces; its specific gravity ranged between 1008 and 1015, and the quantity of albumen contained steadily increased, till, towards the end, it became as much as one-third of the bulk of the urine. At no time were very many tube-casts present, though they were never absent; they were either waxy or epithelial. She died January 1, 1884, of uræmia, which had gradually developed.

Autopsy, five hours after death.—Much emaciation. The left lung was compressed, atrophied, and firmly bound down in the posterior part of the pleural cavity. The remainder of the cavity contained gas and about eight ounces of sero-pus. The pleura was much thickened, and transformed into a pyogenic membrane. The lung itself was hollowed out into a large cavity, with suppurating walls, by an extensive series of bronchial dilatations, with more or less destruction of lung-tissue. The lung was so torn in its removal that it was impossible to say whether or not there had been a communication between it and the pleural cavity. The right lung was emphysematous, and contained some tubercular and cheesy deposits at the apex. The heart weighed nine ounces; its right cavities contained an unusually-developed ante-mortem clot, closely moulded to the pulmonary valve. The kidneys weighed eleven and a half ounces, and presented very characteristic amyloid change. The body of the uterus was unchanged, but its cervix and the upper part of the vagina were destroyed by cancerous ulceration. There was no infiltration of the lymphatic glands. Other organs normal.

Secondary tuberculosis of the bladder, ureter, kidney, and supra-renal body. Exhibited by Dr. W. E. HUGHES.

Ida G., white, æt. 19, had suffered with the usual symptoms of phthisis for about nine months before she came under observation. Her father and a sister had died of phthisis, and she had always taken cold on the slightest exposure. When first seen, she was standing leaning over the back of a chair, suffering the most agonizing pain in the region of the bladder. Desire to urinate was constant and

irresistible, and the passage of the small quantity of urine gave rise to such suffering that she would shriek and almost faint. Till two weeks previous there had been no trouble with the urine; then the pain began, slight at first, and became gradually more and more severe. She had passed frequently masses of clotted blood, with great suffering. Under anodynes the pain became less, and an examination of the bladder showed it to be much contracted, with roughened walls. Examination also brought on a slight hemorrhage. The urine contained nothing abnormal except blood and pus. Under the continued use of anodynes the pain decreased and finally disappeared. After the cessation of pain, the blood disappeared from the urine, but was replaced about two months afterwards by a small quantity of albumen and a few granular tube-casts. About this time œdema began in the ankles and gradually involved the whole of the lower extremities. The tissues finally became so distended that her legs were utterly useless. The urine never contained more than one-tenth of its bulk of albumen, and the tube-casts were always few in number. She died of asthenia four months after coming under observation.

Autopsy, fourteen hours after death.—Extensive degeneration of lungs. Liver was extremely fatty, being of a uniformly yellow color, with no distinction whatever between its lobules. The bladder was small and firmly contracted, its walls thickened, its inner surface roughened, rugose, papillomatous, its mucous membrane thickly studded with tubercle granulations. The substance of the right kidney contained numerous gray miliary tubercles; its pelvis was dilated and presented the same appearance as the inner surface of the bladder. The corresponding ureter was as thick as an index finger; its walls firm, hard, infiltrated with tubercular deposit; its mucous membrane in the same condition as that of the pelvis of the kidney. The right supra-renal body retained none of its original structure: it was a mass of cheesy tubercles, firmly adherent to the kidney. The left kidney, as well as the other organs, was normal.

DISCUSSION.

Dr. FORMAD had examined these specimens for bacilli. None were found in the first case, although the post-mortem was made within about two hours after death and frozen sections at once cut. The lymph-glands were also examined, as well as the lungs, without detecting any bacilli. In Dr. Hughes's second case the lymph-glands as well as the perivascular spaces were crowded with colonies of bacilli. In the first case was an absolutely primary tuberculosis of the serous membranes, with no bacilli, while in the second ulceration was present with lymph-gland

bacilli, as well as invasion of other tissues. This would indicate that bacilli and general tuberculosis most commonly result from surface-troubles, *i.e.*, the mucous membrane of the lungs, intestines, etc., when affected by tuberculosis. In the case of tuberculosis of the serous membranes there was no history of a strumous diathesis, and no general tuberculosis ensued. From a careful study of ten similar cases Dr. Formad was inclined to think that serous tuberculosis was the only form of the disease to which *non-strumous* individuals were liable.

Dr. SHAKESPEARE said that he had been struck with the fact that the third case, with a family history of carcinoma, apparently developed tuberculosis after empyema, and that at the post-mortem carcinoma of the uterus was found. An antagonism between these two diseases has been long believed in, but of late has been questioned, since a careful scrutiny of statistics has shown them to be more commonly associated than is generally believed. Dr. Shakespeare then called attention to the fact that in most cases a family history was obtained running back for only one generation, yet, there being no statement as to the degree to which the investigations had been carried, statistics drawn from such sources must be unreliable, as Dr. Formad, among others, has called attention to the fact that tuberculosis can and often does skip one generation. There were some points in the history of the case of tuberculosis of the serous membranes which suggested that the primary trouble might have arisen in the joints, which are closely analogous to serous sacs, if they are not actually such.

Dr. HUGHES said that in the case of the patient where he had stated that the family history was good, he had gone back for three generations directly and collaterally.

Dr. MUSSEY asked what was the effect of repeatedappings on the development of tubercle, as some clinical teachers are now advising against such operations in simple pleurisy, advocating in preference other remedies to induce rapid absorption of the effusion.

Dr. J. C. WILSON thought that this question could only be answered by an analysis of a large number of cases specially examined for this purpose.

Dr. SHAKESPEARE, having been informed by Dr. Hughes that the so-called tubercles in the case of carcinoma had not been examined microscopically, suggested the reference of this specimen to the Committee on Morbid Growths, since it might really be only a case of miliary carcinosis, and not tubercle. With reference to the influence of tapping on the development of tubercle, experience showed that it most frequently developed where no tapping had been performed, but where rapid resorption had taken place. Pathological experiment has shown with what ease any in-

nocuous substance, even simple traumatism, will set up tuberculosis of the serous membranes. If, then, a general tuberculosis can result from tubercle of serous membranes,—a point not settled as yet by experimenters,—repeatedappings, with, perhaps, the coincident introduction of deleterious substances, might account for the alleged fact mentioned by Dr. Musser.

Tumor of the anterior mediastinum, with secondary deposits in the heart and lungs.
Presented by Dr. J. C. WILSON.

The specimens were removed from the body of an unmarried woman, aged 60 years, who died in the hospital of Jefferson Medical College January 7, 1884. The patient had been singularly free from sickness until about eighteen months before coming to the hospital, three weeks prior to her death. The earliest symptoms were fixed pains of varying intensity in the sternal region, with attacks of palpitation and dyspnoea. These symptoms increased in severity and were aggravated by exertion. After a time she began to experience difficulty in swallowing. Six weeks before admission to the hospital her feet and legs were for the first time observed to be swollen. The dropsy soon became general. She had no knowledge of her family history.

On admission, she suffered from constant dyspnoea, paroxysmal, often urgent, worse at night; inability to lie down; occasional unproductive cough; a sense of weight and oppression in the chest, and particularly in the precordial region; pain under the sternum, and great discomfort in swallowing. There was a high degree of general anasarca and the evidences of pleural and peritoneal effusion. The surface was cool, the skin bluish. The examination of the chest was rendered difficult by the unusual thickness of the tissues, the patient being not only enormously dropsical, but also very fat, and the breasts being hugely developed. It was nevertheless noted that the impulse of the heart was feebly felt, the apex beating in the sixth interspace and somewhat to the left of its usual position; that a faint systolic blowing murmur was heard at the apex, feebly propagated towards the left; that the heart-sounds at the base were unusually obscure, and that the pulse was feeble, frequent, and irregular. There was flatness with absent respiratory murmur at the base of the chest on both sides, and harsh broncho-vesicular respiration over the upper regions of the chest.

In the upper sternal region the cutaneous venous twigs were conspicuous, without rising, as is sometimes seen, above the level of the skin. They were dilated and tortuous, and symmetrically arranged beyond the sternal borders, at which they abruptly ceased.

The thyroid body was enlarged and formed an egg-like projection in the median line. It

was exceeding hard, but not sensitive or the seat of pain. The patient regarded it with indifference, and said that *the lump* had existed for "many years."

I was unfortunately prevented from being present at the autopsy, and this tumor was not removed.

The boundaries of dulness in the pericardium could not be distinctly made out. It was, however, noted that the distribution of pressure-signs absolutely negated the existence of aneurism of the aortic arch as their cause. The pupils were equal in size and in response to light, the voice was unchanged, the radial pulses equally feeble.

The patient died suddenly in an attack of dyspnoea at 9 P.M. on the 7th of January.

Necropsy.—Body much swollen and oedematous; face and thorax very blue. Both the pleural sacs and the peritoneal cavity contained fluid in large amounts. Strong pleural adhesions on left side. The anterior mediastinum in its upper segment was occupied by a large firm mass, mammillated in structure, extending from the notch of the sternum downwards five inches, and adherent to that bone and the costal cartilages. The width was about three inches, and its depth in an anteroposterior direction about the same. It occupied exactly the position of the thymus gland. Its visceral surface was embossed, but smooth; in its upper portion only adherent to the great vessels. No adhesions existed between the parietal pericardium covering its posterior surface and the visceral layer of the pericardium.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 7, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

(Adjourned discussion of Dr. Thomas's paper on this subject, read before the Academy December 6, 1883.)

According to previous announcement, the discussion was opened by the President, who, on account of difficulty of voice, requested Dr. G. Griswold to read his paper for him. In his opening remarks the President said, "During the five years which I have had the honor to occupy this chair I have never before seen a meeting of this Academy so enthralled by the charm of elocution, the fascination of rhetoric, the glow of conviction, and the air of one who speaks by authority—an air which can never carry weight unless it has been before fairly and justly earned by good work—as on the evening of December 6, when the paper was read on 'The Prevention and Treatment of Puerperal Fever.' Its authoritative tone, its earnestness and sincerity, its coloring of being based on experience and observa-

tion, instead of being unconsciously deduced from preconceived theory, give the paper such a plausible air of scientific truth as must secure its acceptance without question by many minds whose belief rests on authority without examination of the data or analysis of argument." The President thought it a duty to examine novelties of doctrine and practice brought before the Academy and subject them to the tests of advanced science of the day and the accumulated experience of the past. Again, in view of some past controversy, aside from the scientific aims of the Academy, it seemed to him important that the general profession should know that in this hall there could be the strongest antagonism in views relating to science, the keenest encounters in intellectual gladiatorship, carried on with all the courtesy of the duello, without individual hostility or the interruption of personal friendship.

Dr. Barker thought all would agree that the paper read by Dr. Thomas was remarkable for originality, in that some of its pathological doctrines and practice taught were not to be found in any work on obstetrics or taught by any writer of acknowledged repute. He would give, in as concise language as was consistent with clearness, his reasons for believing that the whole tone and coloring of the paper were misleading and dangerous because supersaturated with septic infection. He believed, however, that puerperal septicaemia was one of the most dangerous incidents which might occur to the puerperal woman; and ten years ago he delivered a lecture on this subject, covering thirty-seven pages. Although desirous to correct any errors of opinion which he might have fallen into, and to accept new views suggested by advanced science and tested by clinical observation, yet he had found no reason to make any essential change of the views expressed in that lecture. But the paper which was the subject of discussion took the decided ground that puerperal fever was puerperal septicaemia. The author's view seemed plainly to be that metritis, phlebitis, peritonitis, and cellulitis were never seen in the puerperal woman except from the introduction of septic poison at a lesion in some portion of the genital tract. This pathological view had rapidly gained ground during the past few years as a result of the interest excited by German scientists, whose studies were largely of the micro-organisms in puerperal women in hospitals. Dr. Barker thought that no one had yet maintained that the process of parturition and the puerperal state exempted a patient from causes which may excite local inflammation in the non-pregnant woman, or would deny that parturition and attendant conditions, other than the absorption of septic poison, might be sufficient to excite local inflammation. It was his belief that in private practice, when no epidemic influence was

prevailing, twenty cases of local inflammation due to such causes would be met with to one due to septic absorption. He was in accord with Dr. Thomas, as expressed in a work published some years ago, regarding the peculiarities of the system of the puerperal woman. But he differed from the author in considering certain conditions which always followed normal labor as pathological conditions, which the speaker believed to be purely physiological. Certain quotations were made from that paper, going to show that the author regarded the lochia as an offensive fluid, made up of dead and decaying animal tissue, which poisoned the freshly-made and unprotected wounds that occurred during delivery. Dr. Barker asked the question, "Can it be true that the process necessary for the birth of the human race is always attended with the development of a deadly poison, whose malignant effects must inevitably prevent the spontaneous and kindly healing of such little traumatism as always result from the process, and that therefore it is the duty of the accoucheur to take preventive measures of the character proposed? Does every parturient woman, in performing the function of maternity, like the scorpion that carries in its tail an agent for suicide if death is threatened by fire, physiologically generate an equally fatal poison in a corresponding locality, which the obstetrician must guard against by means that are most inconvenient, alarming, and not altogether free from danger?"

He would not now discuss the question, which he had before thoroughly discussed, whether there was a distinct disease called puerperal fever, aside from puerperal septicæmia. But it was well known that epidemics of such a disease occurred in hospital practice, and at times in rural districts where, for twenty-five or more years, not a single death had occurred in childbirth except from the casualties of labor. All we know of any disease is derived from the study of its etiology, its clinical phenomena, and the anatomical lesions. Now, the epidemic disease to which he referred differed in all characteristic points from what was known as septicæmia. It differed in its origin, mode of attack, symptoms, and anatomical lesions. The symptoms were not infrequently manifest a day or two before labor, the child being subsequently born alive, whereas in septicæmia the symptoms were never manifest before or during labor unless the fœtus were putrid. Puerperal fever arose from epidemic causes, from contagion and infection,—the latter from nosocomial malaria, autogenetic infection, and direct inoculation. Now, every physician had probably seen cases in which a decomposing placenta had remained in the uterus for a longer or shorter time, and yet without septic infection taking place. Bad ventilation, contact of septic material, etc., it was true, had

a tendency to induce septicæmia in puerperal women as well as in surgical cases. But puerperal fever might develop from epidemic influences when the generally recognized causes of septicæmia were wholly wanting. In 1873 puerperal fever prevailed in certain of the best and wealthiest sections of the city of New York, while many of the filthiest and poorest districts, where influences which favor the development of septicæmia largely prevailed, were entirely, or almost entirely, exempt from puerperal fever; or, in the latter districts, the mortality from the disease was a third less than in the better neighborhoods. The patients whom he sent out of the city to be confined during this period all had a normal convalescence. Dr. Barker thought that those who studied the causes of puerperal fever from hospital practice exclusively must have one-sided and fallacious views. This was especially the case with persons brought constantly in contact with surgical septicæmia.

Dr. Barker then gave the hospital and general statistics of mortality from childbirth, going to show that exceedingly few women die from puerperal fever, and he thought it altogether improper, and even dangerous, to encourage the management of the woman about to be confined the same as a patient is to be treated who is about to undergo a capital operation: indeed, it would appear that if the importance were attached to Dr. Thomas's recommendations which he would seem to desire us to do, child-bearing ought to be made a penal offence in families whose income was not sufficient to enable them to carry out those requirements.

As to diagnosis, he did not regard the symptoms given by Dr. Thomas in their totality as pathognomonic of puerperal fever. They savored still too much of septicæmia. In private practice we had to treat the sequences of some form of blood-poisoning, which, however, was not necessarily septic poisoning; it was probably due, in the majority of cases occurring in private practice, to atmospheric influences, or to influences equally obscure in this as in other epidemic diseases. In the treatment, vaginal and uterine injections were of great service if the indications for their use were clearly seen in local signs, but they could not be recommended for every case on theoretical grounds and as preventive measures, as they might do harm by retarding cicatrization of slight lesions, by disturbing the patient, and parts which required rest, etc. Cases were related of puerperal fever in which the injections and the measures recommended in the paper by Dr. Thomas had been carried out, and after ceasing them, at Dr. Barker's suggestion, and substituting other measures, the temperature began at once to fall, and all the symptoms improved. His own experience with the methods advocated in that paper had not been favorable. Many years ago he tried them in several cases in Bellevue Hospital,

but they were given up, as they were less successful than other plans of treatment. Cold would do good in certain acute fevers, but in adynamic fevers it would do more harm in other respects than good by reducing the temperature. There was danger of pneumonia, and of other complications due to the weakening effect of continued cold when the patient's system was in this peculiar state. With regard to intra-uterine injections, it would be found, by turning to page 320 of his work on puerperal diseases, that he there, more than fifteen years ago, fully described methods for their employment. The method was employed in 1869, and published in 1874. The subject was also written upon and discussed at the American Gynecological Society before the meeting took place at which Dr. Thomas described and advocated the method. Unless he should yet learn new facts and new arguments to change his views there expressed, he should have to die impenitent.

After the reading of his paper, the President said that, in consequence of a large number of gentlemen having shown their willingness to take part in the discussion, gentlemen whom all present would be anxious to hear, he had felt bound to restrict himself to a limited time; and to content himself merely with the enunciation of general principles, which he believed to be important, without entering largely upon the discussion of details. But there was one point to which he would beg leave now to refer. It was important to know the results of one's own actual experience and his observations, and to know what were his individual convictions when discussing a subject of this nature.

"In the early part of my professional career I began the use of vaginal injections for one week after confinement, the antiseptic used being Labarraque's solution. Nearly thirty years ago, when I first entered upon duty at Bellevue Hospital, it became the invariable rule to make use of these injections of Labarraque's solution for one week after labor. Subsequently, when carbolic acid came into use, this was substituted for Labarraque's solution, and in the work before alluded to a formula for the use of these injections is distinctly and fully given. This formula I habitually followed, not only in hospital but in private practice, in almost every case, until within the past three years. In 1881, during the session of the National Medical Congress in London, at a dinner-party I happened to be seated next to Thomas Keith, of Edinburgh, and, as my rule is to draw out of others and appropriate all the information I can, as well as to give what I may be able to do myself, I became greatly interested in what he told me with regard to his experience and his conclusions concerning the use of antiseptics in ovariectomy. This conversation was very suggestive to me, al-

though nothing was said about antiseptic obstetrics, and led to great reflection on my part subsequently. I began to ask myself whether it was not possible that many of the interruptions and slight disturbances which I had observed to occur in my own obstetrical practice might not have been due to the carbolic acid. On returning, in the following September, to my practice again, I reduced the proportion of carbolic acid one-half, but still for a little time continued its use. But on further reflection, recalling the fact that, even in the strongest proportions in which I had used it, it was not sufficient to destroy the micrococci organisms which are supposed to be the real source of the disease which follows, I was led to ask myself whether it was not possible that nature had acted wisely in *bathing* with a fluid all the broken and lacerated tissues of the parturient canal, with that much maligned substance called lochia, and whether it was not more important to leave all this tract in perfect rest and quiet, as our surgeons tell us is practised in antiseptic surgery. Dr. Smith informs me that it was fully two years ago that I informed him that I should cease the routine use of vaginal injections after parturition. Since September, 1882, it has been my rule to direct, and I have often astonished my old nurses by the direction, never to use even vaginal injections unless they were expressly ordered; and this rule has been followed by my colleague and partner, Dr. A. A. Smith, and I am sure that he will sustain me in this assertion, that since September, 1882, not a single case has occurred in our practice with any interruption of the normal processes to give rise to any anxiety, or to call for more than our ordinary attendance,—namely, one visit daily for nine days. This result may be merely a happy and perhaps we may call it a lucky coincidence, but it seems to me significant, and I feel it a duty to state this fact, and I hope that those who may have applied such a test as this will give us the result of their observation and experience."

Dr. W. M. CHAMBERLAIN would only say a few words with reference to the tube which went by his name, and which had been referred to in Dr. Thomas's paper. He had not found the later tubes, three-eighths of an inch in diameter, too large; and one object which he had in view in making them of good size was that the anterior lip of the cervix might be raised with it at the time of the injection, thus giving free return-flow of the fluid. This suggested an important point in diagnosis in cases of puerperal septicæmia. He had never seen a case in which septic absorption had taken place from the uterus in which the cervical canal was not more or less patulous, and when it was not found patulous he was inclined to look elsewhere for the cause of the trouble.

Dr. H. T. HANKS read some remarks, and said that he believed that the paper read by

Dr. Thomas would have a most vital and lasting influence, and that many of the suggestions made by him would become the accepted rules of practice in the treatment of the puerperal patient. He thought the profession was willing to accept any plan which was likely to promise better results than those of the past. Dr. Hanks quoted certain statistics of the death-rate from puerperal fever in this city, and expressed it as his belief that had the methods of treatment suggested by Dr. Thomas been adopted, a great many lives would have been thereby saved. He himself had had no case, either in country or city practice, which he could not satisfactorily account for on the theory of septic poisoning. Regarding certain rules suggested by Dr. Thomas, he could not altogether agree. For instance, he would not make ante-partum vaginal injections. As to uterine injections, they should only be used when there was a strong probability that there was loose *débris* in the cavity of the uterus, which would be indicated, as stated by Dr. Chamberlain, by the partly-opened cervical canal. In confinement he insisted upon four assistants,—pure air, absolute quiet, judicious diet, and proper antiseptics.

Dr. W. T. LUSK thought that surgical septicæmia and puerperal fever were essentially the same process, and that much of the diversity of opinion on this point was due to a failure to take into consideration the different states of the system in the two conditions.

Confusion had further arisen from the fact that certain complications of the puerperal state, due to exposure of the patient to extraneous poisons, had been erroneously regarded as puerperal fever proper. With regard to the prophylaxis of puerperal fever, a good deal of difference of opinion had existed, which was due to a difference of opinion respecting its septic or non-septic origin, and the disagreement upon the latter point again was due to a failure to recognize a clear distinction between putrid intoxication and septicæmia proper, the latter being identical with puerperal fever. Putrid intoxication and septicæmia were two distinct conditions, depending upon the presence or non-presence in the decomposing fluid of certain micro-organisms. If, for instance, decomposing fluid containing long rod-like bacteria, but no round bacteria, were injected into the circulatory system of an animal, it would manifest certain disordered symptoms, but unless repeated injections were made, or a large quantity of the fluid were introduced at one time, the animal would finally recover. This was also true of the human subject, in whose body the rod-like bacteria were not capable of thriving and producing the effects witnessed in cases of septicæmia. Thus was accounted for the fact that certain physicians had gone from one confinement case to another without conveying puerperal fever, notwithstanding the fact that their

hands had been in a puddle of decomposing matter contained within the uterine cavity of the former patient. But the round bacteria, unlike the rod-like variety, were capable of finding their way through the interstices of the tissues, of passing through the lymphatics into the blood-vessels, whence they could be distributed to the parenchymatous organs, form colonies, and give rise to inflammation; or they might be carried to distant parts by dislodged thrombi. But the rod bacteria, which were not in a very active condition, did not penetrate to a distance from the central wound at which they found entrance; they were feeble; they might make a little fight, get a slight hold on the tissues, advance a short distance from the wound, giving rise to local inflammation; but after getting a certain distance, owing to the resistance encountered from the active vital process of the tissues, they ceased to thrive, and died out before the inflammation set up spread and became general. In this way we could have a local cellulitis or peritonitis produced. But it was not his intention to discuss the pathological state: he only wished to speak of these two different forms of septicæmia, which called for very different kinds of treatment. These two forms were very frequently confounded, the treatment recommended for the one being also that recommended for the other; whereas, in practice, we must deal with each upon its own merits.

With regard to prophylaxis, he thought too great burden would be thrown upon the practitioner of medicine by insisting too much upon very small details. He should hardly expect great results from washing the furniture with antiseptic solutions. He said this with some diffidence, but it certainly had been impressed upon him powerfully by his experience in the lying-in hospital. He had seen many epidemics of puerperal fever, and there was a time when, in the hospital, they washed and scrubbed most vigorously; no pictures were allowed to hang on the walls, extra furniture was removed, the rooms were scrubbed with a five-per-cent. solution of carbolic acid, and yet he could not see that such precautions had the slightest influence upon the disease. Fumigation with sulphurous acid had since been substituted, and he supposed this was a precaution to be recommended before confining patients in houses in which diphtheria, scarlet fever, etc., had prevailed. In this connection he would state that a woman should never be confined in the room adjoining the water-closet. In normal confinement the uterus contracted upon the head and body of the child, and its cavity was not exposed to processes favoring decomposition, but in the vagina it was quite different; there we had heat, moisture, and air, the requisites for decomposition, and if any putrid process developed it was liable first to begin in the vagina, and from there it might creep upward

to the cervix and into the uterine cavity. This he considered an important point in practice, for it was certainly true that in the majority of cases if, when symptoms first developed, the vagina were thoroughly washed out, it would not be necessary to carry the injections up into the uterine cavity. The cause of the infection was not going to creep up into the uterine cavity until after a certain period of delay. Such was true in perfectly normal labor. But in cases in which the hands or instruments had been introduced into the uterus, or pieces of the placenta or membranes remained, rendering putrid decomposition possible, in such cases intra-uterine injections might be the direct means of saving the patient's life, and if under these circumstances symptoms of poisoning developed later, we might feel that we had not done our duty fully at the time of, or just after, labor. The physician should have washed out that uterus with some disinfectant fluid immediately after confinement. He was still inclined to favor carbolic acid, although in the course of a year he might be convinced of the superior advantages of bichloride of mercury. But there were certain cases in which washing out the uterus would not prove of the least benefit,—cases of true septicæmia, cases in which the round bacteria had already passed through the uterus, perhaps having already reached the peritoneal cavity. It would probably prove as useless in such a case to wash out the uterus as to continually sponge the arm after vaccination, hoping thereby to stop the progress of the vaccine virus which had already entered the system. If, however, there still remained within the uterus a puddle of putrid material, it should be removed by one thorough washing of the organ. While in Europe, he inquired as to what was the practice there with regard to washing out the uterus, and had found it to be substantially what he had just stated. The rule in Vienna was, in cases of puerperal fever, also to use uterine suppositories of iodoform and traganth; and he had imagined this to be an excellent idea, for while a student in that city the mortality in the lying-in wards had been five or six per cent., while the past summer, under present modes of treatment, the mortality had only been one-half of one per cent. But he found that in Prague, where they did not use the iodoform suppository at all, not a single death had occurred from septicæmia in eleven hundred confinement cases. The intra-uterine injection was not employed at Prague at present, although at one time, under the teaching of certain leading minds, it had been almost universal, and, as was then supposed, with the best results. Those results had since been shown not to have been so favorable, and the method had now been abandoned. Cleanliness in its minutest details constituted antiseptic treatment in the truest sense.

Dr. P. F. MUNDÉ had listened with a great deal of interest to the paper by Dr. Thomas, and to the discussion this evening, but he had felt at a loss to know what to say in case he should be called upon to speak. Since he first began to practise obstetrics, some eighteen years ago, he had seen a number of cases of puerperal fever in hospital and private practice. More lately it had become his custom to treat cases of puerperal fever locally, precisely as though the case were one of septic wound, just as a wound which gave rise to septic infection would be treated in any other part of the body, and he must confess that he had arrived at the conviction that puerperal fever was, properly speaking, puerperal septicæmia. He said he had arrived at this conclusion, and at the same time he wished to qualify the statement. Certainly, whenever he was called to a case in which he found an offensive discharge from the uterine cavity, attended by rise of temperature, preceded or not by a chill, he felt it his duty to wash out the cavity of the uterus; and if he failed to do this he felt that he had failed in his duty to himself and to his patient. Again, however, he had seen cases in which, in the entire absence of evidence of infection of the uterus or of the perimetrium, he could not help feeling that the condition was something different from what we found in cases of septic infection. He could not help feeling that there were cases in which we could not exactly place the source of the trouble to septic infection. He was obliged to subscribe, in short, to the views of the honored President, that there were some forms of puerperal fever which we could not call puerperal septicæmia. Regarding the etiology of puerperal fever, he had nothing to say, and yet the subject had of late been so much talked up that it seemed we would have to subscribe either to the view that puerperal fever was puerperal septicæmia, or else that there was a peculiar form of puerperal fever,—puerperal fever proper. At any rate, whenever he had a case of fever during the puerperal state, with offensive lochia, he took the risk of washing out the uterus; and, if it were not necessary, he felt that, if properly done, it probably would do no harm. As regards vaginal injections in prophylactic treatment, much had been said for and against. He himself had employed them, although he must admit that the objections which had been offered to the practice might have some foundation. Probably one of the chief reasons why he had permitted them was that the nurse and the patient commonly thought all had not been done that should have been done if they were neglected. He objected to the use of the Davidson syringe for making the uterine injections. Cases had been reported in which the fluid or air had been forced by it into the uterine sinuses, resulting in death. Certain other dangers from intra-uterine injections he thought should be

more forcibly emphasized than Dr. Thomas had done in his paper. The mere absence of discharge from the uterus did not contra-indicate the injections; indeed, it might be a special reason for employing them. This was illustrated by a case in which the discharge had ceased simply because the uterus had become anteverted and closed the outlet. He was doubtful whether it were an advantage to have a terminal opening in the Chamberlain tube. He agreed with Dr. Lusk, that when the temperature remained up in spite of the injections the victorious army had probably gone on into the general system, and our washings simply brought away the rear-guard, and were liable to do more harm than good if continued.

Dr. T. GAILLARD THOMAS was then requested to close the discussion, as the hour was advancing, and said that when a young lad he saw a man tried for his life for the crime of murder. When the case had been presented, the district attorney, who was a very florid orator, got up and made a speech of two hours' duration. All present were very anxious to hear the counsel for the prisoner, who was known to be a very eloquent man. He said, "Please your honor, the case is closed. I rest it there. The gentleman on the other side has made the speech in favor of the prisoner which I intended to make." Dr. Thomas thought such meetings as these—that on the 6th of December and the one to-night—would result in good.

From the very grievous error which it seemed he had made in bringing to the profession, for its adoption, certain views concerning the subject under consideration, he really thought he would do well in preferring gold to silver to-night, by preferring silence to speech. But perhaps he had better say a few words in summing up.

Our honored President had been very guarded in pointing his little attack upon his paper, and seemed to fear that the author would take exception to what he said; but it would take a good deal more than such a discussion to break the ties of friendship of thirty years' duration, or to cause him to take exception to a man whom he had always found, in the past as well as the present, perfectly fair, generous, and courteous. But he had played to-night with the two-edged sword, ridicule. When I found he introduced that into his subject I felt glad, for ridicule is one of the most powerful of weapons, but it is the poorest of arguments. And I said to myself, He is very weak to-night; he totters on his pedestal. Were he not weak, he would not show—what carries pain to my heart and to the heart of every man in this assembly—an irascibility, an irritability, which is entirely uncharacteristic, and I should not be able to recognize, as others present must recognize, the utter want of logic which runs as a stream throughout that paper. But I shall not detain you long

to-night, gentlemen. I have very little to say. I said all that I had to say on the 6th of December. There are only one or two points which I want to touch upon. First, with regard to the pathology which I advocated in that paper. The President seemed to object to the fact that it is not the worn-out pathology of fifty years ago, perhaps. Or we will take more recent times, ten years ago, or even five years ago, upon a subject in which we are advancing so rapidly. Dr. Billings, in some directions some time ago for writing, said, "Have something to say, say it, and get done." Now, had I had nothing to say but what all the text-books contain, had I not had some opinions of my own, I should not have brought that paper before the Academy.

Dr. Thomas thought the paper of this evening had a tendency to magnify certain statements contained in his paper in such a manner as to make what otherwise would have been self-evident truths appear in a false and ridiculous light. He then reviewed some points in the pathology of puerperal septicæmia as he had given it, and which had been criticised by the President, and said he had merely stated that the lochial discharge was a material ready to take on the development of micro-organisms, as mentioned by Dr. Lusk, and that the tissues after parturition were in a state favoring the possibility of the development of germs and their absorption. He considered the pathology given in his paper as abreast of the times, and referred to the labors of German pathologists, and quoted from a comparatively recent number of the *British Medical Journal* (which he had brought for another purpose), in which essentially the same views regarding pathology were advocated by three different writers. With regard to the symptomatology, as with regard to the pathology, the scope of the paper, the title of which was "The Prevention and Treatment of Puerperal Septicæmia," did not permit of more than a rapid sketch of what usually took place when we were called to see a case of puerperal septicæmia. He thought that many of those present, who had listened to his course of lectures, would readily believe that had he written specially upon symptomatology and pathology he would have treated of these points in a more complete and scientific manner.

As to prevention and treatment, he had heard a great deal of talk about some little details, as, for instance, the kind of tube to be used, the position of the patient, etc., matters of very little moment as compared with the great question whether we should adopt the general plan of treatment advocated in his paper, or whether we should continue the old methods of applications of turpentine over a ballooning abdomen, etc.; whether or not micro-organisms may and do enter the system at some point along the genital canal.

Dr. Thomas then spoke of the methods

which he had suggested for avoiding the occurrence of puerperal disease, and which some seem to have taken exception to as being impracticable. To carry out the first requirement, regarding the preparation of the lying-in room, it was only the work of two or three hours for a laboring-woman. But in making rules it was necessary always to give a high, and not a low, standard. He would admit that a woman might be confined in a dirty room and yet have a perfectly natural confinement; but he thought it did good to get the mind of the obstetrician into the proper channel, which was that of cleanliness, three times repeated.

Coming to the second rule, he thought this also quite practicable; and it was only this morning that he had bathed his body and washed his hair and beard with a solution of boracic acid, according to the rule laid down, having attended a case of puerperal septicæmia yesterday. After going over the other rules, to which it would seem that there could not possibly be any valid objection offered, Dr. Thomas spoke of the administration of ergot, which it had been his custom to do for some years, and with apparent benefit, and then of vaginal injections, and said he must confess, in view of the evidence which had been brought out in the discussion, that he felt a little weak on that point. As Dr. Mundé had said, it was his usual habit to make vaginal injections, but he was willing to give it up at any time he became convinced that it was faulty. Only recently he omitted it in a case of deformed pelvis in which labor was brought on at the eighth month, and the woman did perfectly well. In laying down the rules in the paper which he had read, he simply gave what was his practice and what seemed to him to be desirable; but he was willing to discard any part of them as soon as they were shown to be rash or injurious. With regard to intra-uterine injections, he was, as stated in that paper, and in as plain and good English as he could command, utterly opposed to them, except where there was good and sufficient cause; and he had stated as strongly as he could do the dangers which might attend the use of such injections. He was not aware that Dr. Barker had made use of injections as stated, else he certainly would have given him credit.

Dr. Thomas then quoted the statistics given by the speakers of the evening and by others, going to show that puerperal fever was not of such infrequent occurrence as one might be led to suppose, and this was especially the case where antiseptic precautions were not observed. Since the 6th of December he himself had seen as many as five cases of undoubted puerperal fever in private practice, and this was not above the usual number for an equal period of time. He then gave an instance going to show that statements made from memory by physicians, to the effect that

out of a large practice for a great many years they had not had a single case of puerperal fever, were very unreliable. They meant to tell the truth, but their memory failed them.

Dr. Thomas closed his remarks by saying that he was not dogmatically inclined to the rules which he had laid down. Not at all. He was willing to alter them as soon as it was shown that they were objectionable.

NEW YORK STATE MEDICAL SOCIETY.

THE seventy-eighth annual meeting of the New York State Medical Society was very largely attended, and the programme of papers included a large number which had to be read by title in order to finish the exercises in the prescribed period of three days (February 6, 7, and 8). Dr. Hutchins, of Brooklyn, presided, and delivered an able address upon "The Reciprocal Attitude of the Medical Profession and the Community." Although the President was in favor of repealing the resolution of last year with regard to the Code of the American Medical Association, his wise counsel did not prevail, but the action of last year was confirmed by a two-thirds vote (124 to 105). As an evidence of a change of sentiment upon Code questions, the "gentleman and physician code" offered by Dr. Roosa last year, which was then received with so much applause, was again offered, according to promise, but it was received with so little favor that it was withdrawn by the mover of the resolution.

The Committee on Legislation reported in favor of the Examining Board Bill, recommending that the bill known as Assembly Bill No. 120, now before the Legislature, receive the sanction of the Society, and that the committee be authorized to urge its passage. The bill is entitled "An act to establish the medical faculty of the University of the State of New York, to regulate the licensing of practitioners of physic and surgery, and to further regulate the practice of physic and surgery."

It provides that on or before the 1st of June next the Governor shall appoint the medical faculty of the University, to consist of nine members, who shall be authorized practitioners of physic and surgery, but not connected with any medical school or college which grants the degree of M.D., three of such members to serve for three years, three for four years, and three for five years. It is made the duty of said faculty to examine all applicants for license to practise in the various branches of medicine and surgery, meeting for that purpose semi-annually. Power is given to refuse or revoke licenses. The bill also provides for registry of practitioners, and penalties are specified for violations of the law, or the making of false statements to secure licenses.

An unexpected opposition was encountered to the report, another act (known as the Medical College Bill) being offered as a substitute. It was finally decided not to take final action upon either bill, but the committee was instructed to communicate with the various county medical societies, the Committee on Legislation being increased for this purpose, and to report at the next meeting.

A resolution was adopted memorializing Congress in favor of a fire-proof building for the museum and library of the Surgeon-General's office, and asking for the prompt publication of the catalogue of the library, and recommending that proper provision be made for the future increase of the library.

The project of raising a fund to erect a suitable memorial to the late Dr. J. Marion Sims in the city of New York was brought to the attention of the Society.

During the morning of the first day the following papers were read and discussed: "Two Unusual Cases in Obstetrical Practice," by Dr. W. C. Wey, of Elmira; "A Case of Double Hare-Lip," by Dr. J. P. Creveling, of Auburn; "Prophylaxis of Summer Complaints of Children," by Dr. D. Little, of Rochester; "Canalization as applied to Amputation of the Female Breast to assure Primary Union under One Dressing," by Dr. A. G. Gerster; "An Operation for Correcting Deformity of the Auricle," by Dr. O. D. Pomeroy, of New York; "Poisoning by Potassium Chlorate," by Dr. G. B. Fowler, of New York.

During the afternoon session the following were read: "The Establishment of Hospitals in Small Cities," by Dr. E. H. Parker, of Poughkeepsie; "Congenital Lipoma," by Dr. A. Jacobi, of New York; "The Value of Electricity in Diagnosis," by Dr. L. E. Felton, of Potsdam; "A New Method of Partial Extirpation of the Cancerous Uterus," by Dr. E. Van De Warker, of Syracuse; "Orbital Cellulitis," by Dr. T. R. Pooley, of New York; "Operations for the Closure of Hard and Soft Palate, with Results," by Dr. Albert Vanderveer, of Albany; "The Cause of Sympathetic Serous Iritis, with Remarks," by Dr. D. Webster, of New York; "A Plea for the Pharmacopœia," by Dr. L. Johnson, of New York; "Horse-hair Sutures and Drainage," by Dr. S. Lewis, of New York.

On Wednesday (second day) the reports of committees and the discussion of the Medical Examining Board Bill occupied most of the time. Dr. W. Mittendorf, of New York, read a paper describing "Foerster's Method of Ripening Cataract;" Dr. W. F. Sheehan read one on "House Sanitation as it is and as it should be." After a number had been read by title, Dr. Milton J. Roberts read a paper entitled "The Mechanical Treatment of Hip-Joint Disease," and Dr. A. M. Phelps, of Chateaugay, read one on "Synovitis of Knee- and Ankle-Joints." Dr. C. L. Dana, of New

York, reported a number of cases of "Morbid Somnolence."

On the third day Dr. E. L. Partridge, of New York, read a paper on the "Management of Face Presentations;" Dr. A. Jacobi read a communication relative to the "Use of Arsenic and Digitalis in Phthisis."

The report of the nominating committee was then received, and the following officers were elected for the ensuing year:

President.—Dr. B. F. Sherman, of Ogdensburg.

Vice-President.—Dr. P. R. H. Sawyer, of Bedford.

Secretary.—Dr. William Manlius Smith, of Syracuse.

Treasurer.—Dr. Charles H. Porter, of Albany.

Censors.—Southern District: Drs. F. A. Castle, G. H. Fox, David Webster. Eastern District: Drs. E. D. Ferguson, N. L. Snow, Le Roy McLean. Middle District: Drs. Alonzo Churchill, J. K. Chamberlain, Robert Frazer. Western District: Drs. T. F. Rochester, B. L. Hovey, Theodore Dimon.

Syracuse University, Medical Department.—Dr. J. P. Creveling.

Committee of Arrangements.—Drs. S. B. Ward, W. S. Ely, E. L. Partridge.

Committee on By-Laws.—Drs. W. C. Wey, Elmira, Alexander Hutchins, Brooklyn, and William M. Smith, Syracuse.

Committee on Hygiene.—E. V. Stoddard, Rochester; Caleb Green, Homer; Edwin Hutchinson, Utica; William H. Bailey, Albany; A. N. Bell, G. J. Fisher, William T. Sheehan.

Committee on Medical Ethics.—Drs. A. Jacobi, New York, Arthur Matthewson, Brooklyn, and J. W. Whitbeck, Rochester.

Committee on Prize Essays.—Drs. W. M. Potter, Alexander Hutchins, W. S. Ely.

Committee on Publication.—Drs. William M. Smith, Syracuse; Charles H. Porter, Albany; H. D. Didama, Syracuse.

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Honorary Member.—Dr. William G. Bronson, Connecticut.

Also, the following delegates:

To the International Medical Congress at Copenhagen.—Drs. S. O. Vanderpoel, New York; A. M. Phelps, Chateaugay; J. O. Roe, Rochester; A. Vanderveer, Albany; J. P.

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Oleate of Aconitine, 2 per cent.	Oleate of Mercury, 5 per cent. and Morphine, 2 per cent.
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To the Massachusetts Medical Society.—Drs. G. G. Monroe, St. Lawrence; G. G. Hopkins, Kings; Henry March, Albany.

To the Connecticut Medical Society.—Drs. M. L. Bates, Columbia; S. H. Freeman, Albany.

To the Canadian Medical Association.—Drs. L. C. Felton, C. M. Wilson, Conant Sawyer, F. C. Curtis, D. V. O'Leary.

To the British Medical Association.—Drs. Fordyce Barker, Harvey Jewett.

To the Ontario Medical Association.—Drs. H. R. Hopkins, Lucien Howe.

To the Pennsylvania Medical Society.—Dr. C. L. Stiles.

To the Vermont Medical Society.—Drs. James L. Little, Joseph Lewi.

The customary banquet was held on the evening of the second day, which was largely attended, and where great harmony prevailed, forming a marked contrast to the meeting of the Society of the evening before during the discussion of the Code question.

ALBANY, February 9, 1884.

GLEANINGS FROM EXCHANGES.

THE DIGITALIS GROUP.—At the November meeting of the Royal Medical and Chirurgical Society of London, Dr. Sydney Ringer and Dr. Harrington Sainsbury contributed a paper containing some investigations into the Action of the Digitalis Group, of which the following is an abstract. Digitalis is taken as the type of a group of drugs whose influence is exerted mainly on the circulatory system. The facts of chief importance in this action are: 1. The arrest of the heart in systole (if the dose be sufficiently large). 2. The raised blood-pressure which obtains throughout till close upon the final systolic arrest. Whilst the spasm of the heart is universally recognized as the result of the digitalis action, and as caused by direct action of the drug on the cardiac tissue, there is doubt both as to the condition of the arterioles under the influence of the drug, and as to whether the influence be direct or indirect. Digitalis action upon the heart may be defined as the production of continuous spasm of the heart-muscle by direct action of the drug upon this tissue. It is pointed out that this spasm must not be of the nature of a tetanus,—*i.e.*, of a fusion of adjacent beats; and, further, that it may affect either the whole heart or a limited portion of the same, according as the drug is applied to the whole heart or to a limited portion. Thus defined, the already very large group of bodies classed by Schmiedeberg under the heading digitalis becomes yet larger, and will include, among others, the caustic alkalies and barium salts: Experiments are recorded in which an artificial

saline solution was circulated through the vessels of the hinder extremities of a tortoise whose brain and spinal cord had been completely destroyed. The experiments were so arranged that the rate of flow could be measured, and so soon as a uniform rate of flow had been established the drug was added to the circulating fluid. The results obtained with digitalis were both uniform and striking: invariably on the addition of the drug the circulation became slowed, even to the extent of almost complete stasis. Similar experiments were made with the following members of the digitalis group: strophanthus, dyak poison, convallamarin, and scillitine. In the case of each of these drugs evidence of constriction of the vessels was obtained in the shape of a slowed circulation. Digitaline, however, ranked as by far the most active of the series. Similar experiments were made with hydrate of potassium, and with the carbonates of potassium and sodium, and sodium bicarbonate, which, with the exception of the latter, gave like evidence of constriction of the arterioles. Experiments carried on simultaneously with the above on the excised frog heart showed, in the case of each of the above drugs, the production of more or less persistent spasm, with the notable exception, however, of sodium bicarbonate, which gave none. Experiments then followed which sought to determine whether the calibre of the vessels, in addition to being directly influenced by these drugs, could be affected by them through the nerves. Digitaline was alone experimented with. The results were purely negative. Finally, to meet the suggestion as to the action of the drugs on the skeletal muscles, experiments were made with frogs, given quantities of solutions of digitaline, strophanthus, dyak, scillitine, barium chloride, and caustic potash and soda being injected. The results showed the first five to be notable muscle-poisons, the muscles rapidly dying and losing their excitability; indeed, even before the death of the animal a very marked diminution of muscular irritability was in several cases observed. Comparing the actions among each other, it was noted that strophanthus and dyak poisons acted much more powerfully on the skeletal muscles than did digitaline. To sum up, the argument, briefly stated, is as follows. Starting from the systolic digitalis heart, which is admittedly a result of direct action of the drug on the cardiac muscle, we have found: 1. That for the other members of the digitalis group here examined a like action obtains. 2. We have suggested that the local action on the heart may serve as the definition of digitalis action; this accepted, we have pointed out that Schmiedeberg's already large group must be still further enlarged. 3. Arguing from this action on the muscular tissue of the heart, we have inferred that the action on the muscular tissue of the arterioles will be similar, an inference verified by actual experi-

ment. 4. So far as our experiments go, we do not find that these drugs influence the calibre of the vessels indirectly through the nervous system. 5. We have pointed out that many of the digitalis group are notable muscle-poisons, and that the tissue of the heart, standing functionally midway between the striped and unstriped muscular tissues, may permit of the inference that a marked action of the drug on the tone of the heart would indicate a similar effect on the tone of the vessels, whereas a marked action on the cardiac beat would indicate like action on the skeletal muscles.

TREATMENT OF WHOOPING-COUGH BY CROTON CHLORAL.—Dr. W. C. Webb, of Bryantville, Ky. (*American Practitioner*), has employed croton chloral in whooping-cough with much benefit. It does not derange the digestive organs, nor affect the vital nervous centres. Patients frequently fall asleep on their chairs after using it. On taking this remedy, the patient must be watched lest toxic symptoms be manifested. A child from one to two years old may take one grain of the preparation every four hours. One ten years old may take two grains as often. After the first week the dose should be lessened and given at longer intervals. Should there be much gastric irritability, or should the paroxysm be very severe, a few whiffs of chloroform may be given in advance of the croton chloral. This may be repeated only three or four times.

The following formulæ are given for its administration:

℞ Croton chloral, ʒj;
Tinct. cardamom. comp.,
Glycerin, aa, ʒij.

Sig.—One-half teaspoonful every four-hours for a child two years old and under.

Or, ℞ Croton chloral, ʒj;
Tinct. belladon., ʒij;
Tinct. cardamom. comp., ʒij;
Glycerin, ʒij. M.

Sig.—Dose: One-half teaspoonful.

—*Medical Summary.*

TREATMENT OF VASCULAR TUMORS WITHOUT OPERATION.—Floriani has recently treated six cases of telangiectasis with sublimate collodion (fifteen per cent. solution). The collodion is put on in four layers by means of a camel's-hair brush, each layer being allowed to dry thoroughly before the next is applied. On the fourth day the edges are raised and a second series of four applications are made, this being repeated every fourth day until the swelling disappears and the edges are depressed. After the crust falls off, the place seems depressed and reddened, but soon resumes its normal color. This treatment is painless, and requires only one or two months to cause an angiomatic tumor to disappear. (*Allgem. Wien. Med. Zeit.*, No. 32, 1883.)—*The Practitioner.*

RECOVERY FROM TETANUS UNDER ARSENIC AND GELSEMINUM.—Dr. E. J. Beall, of Fort Worth, Texas, reports a case of a negro man who was suffering from a railroad crush of the toes, and who had symptoms of tetanus when he was admitted to the hospital. The gangrenous toes were removed by an amputation through the metatarsal bones, but the tetanus continued. The Hodgen treatment of Fowler's solution, eight drops, and five drops of fluid extract of gelseminum, were given every four hours for twenty-four or thirty-six hours, when, the effects of the latter drug being evident, it was discontinued, the arsenic being gradually withdrawn within the next fortnight. The wound healed kindly, and the patient made a good recovery.—*Texas Courier-Record of Medicine.*

A somewhat similar case of traumatic tetanus successfully treated by arsenic is reported (*Weekly Medical Review*) by Dr. Bennett, of Fort Smith, Arkansas.

SALICYLATE OF SODIUM IN SEPTIC POISONING.—Dr. S. H. Stout, of Cisco, Texas, in removing a malignant tumor, accidentally pricked his finger, and a few days later inoculated it with pus while dressing the wound. After a couple of days' malaise, marked septic symptoms set in, with chill and a high fever; the arm was swollen to the shoulder-joint; the poisoned finger was gangrenous. He took salicylate of sodium, ten grains every half-hour, which after four doses produced profuse diaphoresis. Subsequently following routine treatment, he entirely recovered, with full use of arm and hand, except the flexor tendons of the finger, which had sloughed away.—*Texas Courier-Record of Medicine.*

CIMICIFUGA IN EPILEPTIFORM NIGHTMARE.—Dr. Ed. M. Small, of Eastport, Me., sends us the report of a case occurring in his practice almost identical with one published recently in these columns in the report of Professor H. C. Wood's clinic. The disease was epileptiform nightmare, and it was cured in Dr. Small's case by half a teaspoonful of powdered *Cimicifuga racemosa* being administered at bedtime. The paroxysms at once ceased, and there had been no return in a lengthy period of observation. He also was ordered to partake of only a light supper each night, and to avoid excitement as much as possible.

ANTAGONISM OF CHLORAL AND STRYCHNIA.—In a communication to the *Texas Courier-Record of Medicine*, Dr. W. B. Brooks reports a case of accidental strychnia-poisoning successfully treated with chloral, the remarkable feature being that, a few months later, the same patient took an overdose of chloral, which rendered her perfectly comatose; but, under the hypodermic use of strychnia, she rallied soon.

MISCELLANY.

PHOTOGRAPHY IN HOSPITALS.—Most of the French hospitals, according to our contemporary, *Engineering*, have now a photographic studio attached for photographing the sick persons at different times. The rapid dry-plate process is employed, and Prof. Charcot, of La Salpêtrière, has devised an electrically worked camera, which is very useful in taking a series of views in rapid succession. Certain classes of patients are photographed on their entry into the hospital, and at regular intervals afterwards. In cases of hysteria, for example, it is interesting to note the original contractions and compare them with succeeding ones. The photographs are placed in an album for study of the disease, and for comparison with others taken from other patients. In this way the leading features of the disease will be recognized. The new printing processes also enable these photographs to be copied, and distributed to other hospitals and to medical men. Micro-photography, or the photographing of microscopic objects, is also a valuable branch of hospital-work which is becoming better recognized every day. The apparatus of Prof. Charcot consists of a camera with a movable aluminium shutter, controlled by an electro-magnet and clock-work. A key and battery send an electric current through the magnet at the will of the operator, and working the shutter exposes an objective to the object. The photographer controls the apparatus by his hand, and, with his finger on the key, watches his patient until the desired moment arrives, then presses his finger and exposes the plate for the instant required to take the likeness. When a regular series of views in rapid succession are required, the hand-key is replaced by an insulating barrel, set round with metal contact-pieces like a commutator, and these pieces make contact with a contact-spring as the barrel revolves by clock-work. These metallic pieces are made of a triangular form, so that, when a short exposure is required, the spring is placed so as to rub over them towards the apices of the pieces; and, when a longer exposure is required, it is caused to rub over them near the bases. The metronome, or automatic mercury current-interrupter, of M. Gaiffe is also applicable to this camera as an automatic key.—*The British Medical Journal*.

TOBACCO AS AN ANTIDOTE IN STRYCHNIA-POISONING.—A woman having taken the contents of a packet of "Battles' Vermin-Killer" (containing strychnia) was found suffering with opisthotonus and frequent tetanic convulsions. The medical attendant administered half an ounce of sulphate of zinc, which produced free emesis. He then made an extemporaneous infusion of tobacco, which was strained through some muslin and administered. In about ten minutes vomiting again

ensued, but not till the paroxysms were reduced to one in every three minutes and a half. A second draught was similarly prepared and administered, which was retained for a longer period, the convulsions decreasing in frequency and intensity. She was then ordered warm milk and beef-tea every two hours, and made a good recovery. The case is reported by Dr. Burton, of Birmingham, who also directs attention to the anomaly of the State paying a fee to the coroner and undertaker in these cases should they die, but giving no remuneration at all to a physician whose skill averts fatal consequences.

[The adoption of some plan similar to that of the Night Medical Service of Paris might solve such questions, the State becoming responsible for the physician's fee if he is summoned by the police to attend such a case.—ED. P. M. T.]

ELECTRIC LIGHT FOR MICROSCOPY.—At the Illinois State Microscopical Society meeting, held November 9, 1883, Dr. Mercer, of Chicago, exhibited two small electric lamps for use with the microscope. They are miniature incandescent Swan lamps, capable of giving respectively two and one-half and four candle-power. Their size is not larger than a pea, and the shape of one is globular and that of the other somewhat conoidal; they are used, the one immediately beneath transparent objects, and the other immediately above opaque objects. The incandescence can be sustained by four Leclanché cells for a period of half an hour, or by means of a storage apparatus, which Dr. Mercer also exhibited, for a period of twelve hours. The doctor claims a superior clearness with this means of illumination over that which is obtained by much more expensive and complicated devices. The lamps were imported from London, England, and the storage-cell was constructed at Dr. Mercer's suggestion, with the counsel of Mr. Johnson, of the Western Electric Company. The storage-cell can be readily charged from any dynamo.—*Weekly Medical Review*.

THE LANCET ON THE USE OF THE TELEPHONE FROM A MEDICAL POINT OF VIEW.—As if the telegraph and the post-office did not sufficiently invade and molest our leisure, it is now proposed to medical men that they should become subscribers to the telephone company, and so lay themselves open to communications from all quarters and at all times. It must be admitted that this would have its conveniences. The only fear we have is that when people can open up a conversation with you for a penny, they will be apt to abuse the privilege; and that to have a dozen telephonic consultations in one day, or conversations that might be thought to supersede a consultation, would be a doubtful addition to one's advantage or repose. Be this as it may, it seems not improbable that we

are on the eve of a great development of the telephonic system in London.

BACILLIPHOBIA.—Herr Oberprofessor Keimerzeuger von Verdammtnarrburg, and Professor Coccischlächter, it is claimed, have recently made some remarkable discoveries in disease-germs. For instance, the bacillus of gout flourishes on green-turtle soup, while the bacterium of colic finds a favorable soil in the green apple; tubercle-bacilli flourish on boiled cabbage, but perish on moist sauerkraut. By a course of persistent diet of the latter article, under the direction of the Herr Oberprofessor, some of the assistants were saturated up to the point of insusceptibility,—a discovery which will probably put an end to the cavils at the failure of these researches to yield practical results. Most startling of all is Herr Keimerzeuger's latest discovery, which is of the greatest importance to the human race; indeed, its perpetuation may be said to rest upon it; but for this we must refer to the original communication from *Riechschwamm* which appeared in the *Medical News* (February 16), and which is written in a style of convincing candor by one who evidently does not belong to Verdammtnarrburg himself, but is an American flourishing a *nom-de-plume*.

NOT ON THE LIST OF THE ROYAL COLLEGE OF LONDON.—The new attendant of the watering-place bookstore stood behind the counter, with his head a little on one side and a white handkerchief around his neck, when a dainty summer sojourner tripped in, and, fixing her blue orbs upon him, asked, "Have you got a 'Newport Aquarelle'?" To which, with a thankful smile, he replied, "No, marm; I don't think it's nothin' but a common bile."—*American Druggist*.

SOME time since, a Mr. Seybert, of this city, left a legacy of fifty thousand dollars to the Literary Department of the University of Pennsylvania for the establishment of a chair of Intellectual Philosophy, with a special request for scientific investigation of the subject of spiritualism. It is understood that a commission, appointed for the purpose, has been pursuing some researches under the direction of its chairman, Prof. William Pepper.

AN almost unexampled occurrence has taken place near Venice,—a triple suicide. The victims were three sisters of good family, one suffering from approaching blindness and another from epilepsy, but the third "a young lady of extreme grace and beauty," who had announced her intention of not surviving her sisters. Their last act was to place a wreath of flowers upon their mother's tomb. This is "a riddle of the painful earth" indeed.—*The Press*.

UNSKILFUL medicine-men have no place among the Piute tribe of Indians. When one

of them loses three patients consecutively he is sent to join them in the happy hunting-grounds. This penalty has just been inflicted on Ma-sho-go, the late chief medicine-man, at Buffalo Meadows, who was shot to death.

THE reception given by the Jefferson College Alumni Association to Professor Parvin at the St. George Hotel on the 28th ult. was very largely attended. Addresses were made by Professor S. D. Gross, Judge Ludlow, and Mayor King.

THE annual meeting of the Alumni Association of the University of Pennsylvania was held on the 31st ult., in the chapel. An interesting and witty address was given by the President, Dr. William Hunt.

NOTES AND QUERIES.

ERRORS CORRECTED.

In the pamphlet containing "Proceedings of the Alumni Society of the University of Pennsylvania for 1882," recently sent to members, on page 15 there is an error which should be corrected through the *Times*, as many of your readers have received copies. The cost of "Morris Plains Hospital" is there given as \$800,000, when it should be \$2,800,000.

HIRAM CORSON.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 3, 1884, TO FEBRUARY 16, 1884.

PERIN, GLOVER, LIEUTENANT-COLONEL AND SURGEON, MEDICAL DIRECTOR.—Is granted one month's leave of absence, with permission to apply at Division Headquarters, Missouri, for an extension of one month. S. O. 16, Department of Dakota, February 9, 1884.

To be Assistant-Surgeons, with the rank of First Lieutenant, to date December 3, 1883:—William D. Dietz, Walter W. R. Fisher, William Stephenson, Adrian S. Polhemus, John L. Phillips, Reuben L. Robertson, William C. Borden, Edgar A. Means, Guy L. Edie, William D. Crosby, William L. Kneidler, Charles M. Gandy, Charles S. Black, James E. Pilcher, Alonzo R. Chapin. S. O., A. G. O., Washington, February 11, 1884.

BREWSTER, WILLIAM B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Resignation accepted, to date February 7, 1884. S. O., A. G. O., Washington, February 11, 1884.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Walla Walla, Washington Territory. S. O. 14, Department of the Columbia, February 5, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM FEBRUARY 2, 1884, TO FEBRUARY 16, 1884.

Surgeon W. K. VAN REYPEN from the U.S. steam-ship "Powhatan" to the Navy Department as Assistant to the Bureau of Medicine and Surgery, and Acting-Chief of that Bureau.

Surgeon A. A. HOEHLING from special duty at Washington to the "Powhatan."

Medical Director S. F. COUES to the Naval Medical Examining Board at Philadelphia, March 3, as the relief of Medical Director P. J. HORWITZ, who retires on that date.

PHILADELPHIA, MARCH 8, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE TREATMENT OF CARBUNCLE BY COMPRESSION.

Delivered in the Hospital of the University of Pennsylvania,

BY JOHN ASHHURST, JR., M.D.,

Professor of Clinical Surgery.

Reported by LOUIS J. LAUTENBACH, M.D.

THIS man has been already before some of my ward classes; but, as there are many present to-day who do not meet me in the wards, I am glad to have the opportunity of bringing him before you. He presents one of the most instructive cases which we have had in the hospital this winter.

This patient was admitted to the ward on Wednesday of last week, being ten days ago, with a very large carbuncle of three weeks' duration. It began as a pimple, and gradually increased in size. This is the usual history of a carbuncle: first, the presence of a pimple, which soon develops a central vesicle, and then, either with or without irritation, such as scratching or pricking with a pin, begins to spread, the carbuncle in a week or ten days attaining its maximum size, seldom more than four or five inches in diameter. Yesterday a week ago, measuring this carbuncle, we found its dimensions to be nine inches by eight, independently of the large amount of indurated tissue around the livid mass itself. The dimensions of the carbuncle, including this indurated tissue, were at least eleven by ten inches, and it was fully three inches in depth.

A carbuncle is in reality nothing but a large boil: there is no absolute distinction between a furuncle and a carbuncle. This carbuncle is now smaller than it was when the patient came to the hospital, and it is subsiding every day, though up to the time of the patient's admission it had been steadily increasing in size.

There are some peculiarities about the ulceration of a carbuncle which have not been understood until quite recently. It had long been observed that carbuncles were apt to ulcerate at numerous distinct points, giving the surface a sieve-like or cribriform appearance; but the anatomi-

cal explanation of this condition has only been furnished within a few years by an American surgeon, Dr. Collins Warren, of Boston. By microscopical examination of the skin of the back, where carbuncles usually occur, Dr. Warren has found little processes or tubes of fat connecting the deeper tissues with the surface; he has named these tubes the fatty columns, or *columnæ adiposæ*; and it is along these columns that the pus of the carbuncle, which originates as a phlegmon of the deep cellular tissue, begins to make its way to the surface. In this case there are as yet but two openings, which lie close together and probably will soon coalesce. A slough—what is popularly called the *core*—is beginning to protrude from one of these openings: it is a slough of the deep cellular tissue.

Carbuncle, while a very painful and annoying affection, is usually not a very dangerous one when properly treated. Death does, however, occasionally follow, and I have recently seen the statistics published by a German surgeon, who treated eleven cases of carbuncle by incision, six of these proving fatal by pyæmia. I have myself seen no death from carbuncle, nor do I recall any in the practice of other surgeons, unless in cases where there was some grave constitutional complication.

Carbuncle in one part of the body, the face, is considered particularly dangerous. It is said that but one case in nine gets well; but my own observation would lead me to think this an exaggerated estimate. This is a comparatively rare form of the disease, but I have seen two or three cases of facial carbuncle, all of which have ended favorably; it is true, however, that none of them were very severe. Death in facial carbuncle results from transference of the inflammation to the sinuses of the dura mater, or from pyæmia. But in ordinary carbuncle, unless the patient has Bright's disease, or diabetes (an affection which predisposes to carbuncle), or unless the inflamed mass is so situated as to endanger internal organs,—peritonitis may follow an abdominal carbuncle,—death will seldom ensue, except as a result of injudicious treatment.

The old-fashioned treatment, which in my student-days we were taught should be used in every case, was to make an incision the entire length and depth of the

carbuncle, this incision being crossed by another at right angles to it, and extending the entire breadth and depth. Had this mode of treatment been practised in the case before you, we should have had two incisions, one eleven inches long by three deep, and the other of the same depth and ten inches in length. You can see what an enormous wound would have been made, and how much blood would have necessarily been lost. Death even may occur from hemorrhage, for there is a recorded case in which a surgeon made the regulation-incisions in the afternoon and directed the nurse to apply a poultice, saying that he would see the patient in the morning. Next morning he went to see his patient, and found that he had died from hemorrhage during the night. Then, besides this risk from bleeding, incisions increase the risk of absorption of poisonous matter, as they leave a very large raw surface. Another, though less serious, objection is that the resulting wound is a very large one, and that the time required for healing is correspondingly prolonged. In order to avoid hemorrhage, some surgeons practise subcutaneous incision; but this is an uncertain operation and presents no particular advantage.

Of course, the treatment by incision has something to be said in its favor. No course of treatment could have been in general use for so many years without being of some value. It somewhat diminishes the pain of the carbuncle, and sometimes seems to prevent its spread, but it is not always certain even that it will do this. The disadvantages of incision I consider much greater than its advantages.

There is another mode of treatment which is adopted either by itself or in connection with incision,—the use of caustics. They are either employed to cause central sloughing or are applied as “caustic arrows,” like the spokes of a wheel. The use of caustics in this way was introduced by Maisonneuve for the removal of tumors, and Sir James Simpson recommended the injection of caustic solutions in a similar radiating manner. I can remember quite distinctly the case of an old man with carbuncle who was a patient in the Pennsylvania Hospital when I was a resident physician there. The usual crucial incisions had been made, causing great pain and free bleeding, and it was my duty every day to cauterize the wound

with the solid stick of nitrate of silver; and I can remember how that old man used to fairly shiver with the pain at every dressing. He got well at last, but it was after many weeks of needless suffering.

The first case in which I used the pressure-treatment, which I now invariably employ, was that of an old woman at the Episcopal Hospital, who had a large carbuncle, and who was so old and feeble that I thought it would be really dangerous to make incisions. Mr. O’Ferrall, an Irish surgeon, was the first to recommend this mode of treatment: he applied compression by means of a plaster made to cover the whole mass of the carbuncle, and when suppuration began he cut a central opening for the escape of pus. I have preferred to use adhesive strips laid on concentrically, just as we use them in the treatment of swelled testicle.

We begin to apply the strips at the margin, and gradually bring them more and more inward, leaving a space at the centre to allow the slough to come out. We began treatment in this case last Wednesday a week: up to that time the carbuncle had been constantly increasing, but since then the progress, fortunately, has been the other way. The pain was immediately much relieved, so that the patient has now only an occasional darting pain, but nothing really to give him distress. The carbuncle is smaller, and is getting flatter. It now measures eight by seven and a half inches, and is not more than two and a half inches deep. The patient has not lost a drachm of blood since he came into the hospital. You can see that the pus and sloughs of cellular tissue are slowly discharging themselves, and there is so far no sign of any additional opening. We have every reason for thinking that this patient will convalesce without any further trouble. Over the centre of the carbuncle we are using a small poultice, which we will change after a time for a dressing of resin cerate or zinc ointment, as may seem desirable.

There is another mode of treatment of which I have heard, but which I am happy to say I have never seen practised. Some surgeons have been so heroic as to excise the whole mass of the carbuncle; some surgeons, too, have excised gummatous tumors. The first can be made to disappear by simple compression, and the second will be absorbed under the use of

iodide of potassium. To excise the one is as unjustifiable and as unnecessary as to excise the other.

In this case, on account of the mode of treatment which we have adopted, the ulcer left after the separation of the sloughs will be small, and the cure will be much more rapid than it would be if we had made incisions. I do not know of any instance in which the dicta of "authority" have come down to us with more injury than in the treatment of carbuncle by incision.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF PHYSIOLOGY.

BY ROBERT MEADE SMITH, M.D.,

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MECHANICAL IRRITATION OF THE CEREBRAL CORTEX.

THE doctrine of the localization of motor centres in the cerebral cortex is greatly strengthened by the announcement of Prof. Luciani, of Florence (*Centralblatt für die Medicinischen Wissenschaften*, December 15, 1883), that he has succeeded in producing motor phenomena by mechanical stimulation of the cerebral cortex. In 1878, in his work on the causation of epilepsy, Prof. Luciani first showed that in the dog that portion of the cerebral cortex which lies in the crucial sulcus was, like the sigmoid gyrus, capable of excitation with the induction current, and that it also contained motor centres for the skin and muscle of the hind- and fore-foot of the opposite side. Consequently he claims that excision of the exterior post-crucial convolution does not remove these centres, as there is at least three times as much surface of cortex containing these centres in the crucial sulcus as on the above-mentioned convolution.

In some new experiments on this locality he has succeeded in exciting these centres by well-defined mechanical irritation. Numerous attempts have already been made to stimulate the cerebral cortex mechanically, but always in vain, because, as the author claims, the irritations have been always confined to the superficial portion of the cortex. Prof. Luciani, however, claims that by applying the excitant to

the deeper portion of the sulcus cruciatus he has invariably found this portion of the cortex susceptible of mechanical stimulation when the following conditions have been observed. First, in exposing the brain, the animal must have lost little blood and have been little excited; second, the animal must be strong and full-grown; third, the morphia narcosis must not be very profound, or if chloroform has been employed its effects must have largely disappeared before the experiment can be successful; fourth, before the mechanical irritability of the cortex is attempted, its electrical irritability must first be proved to be present.

In order to produce mechanical irritation, all that is necessary is to divide the arachnoid in the centre and to divide the bridge which connects the borders of the crucial sulcus, avoiding the vein which passes through it. A rasp is then passed into the sulcus and gently scraped over the surface of the furrow. Complex movements of the feet of the opposite side at once are produced,—more marked in the hind-foot when the inner and deeper part is irritated, more marked in the fore-foot when the irritation is applied to the outer or more superficial half of the crucial sulcus.

The effects are therefore the same in mechanical as in electrical stimulation, though less energetic in the former. The chief difference in the consequences of the use of the two forms of irritation is that the electrical stimulation may be often employed with the same result, while with mechanical irritation the excitability of the part experimented on at once declines and is soon entirely destroyed. It would appear, therefore, that mechanical stimulation of the cortex, as in other instances of mechanical nerve-irritation, is effective only by producing destruction of nerve-tissue.

Prof. Luciani explains the fact that mechanical stimulation of the convolutions fails to produce results, while the same form of irritation applied to the deeper-lying parts of the sulcus produces well-defined movements, as due to the loss of irritability in the former from exposure to the air and from mechanical injury in the operation, while the portions in the sulcus are protected by their position, and therefore preserve their irritability to both mechanical and electrical stimuli, the latter

only being the case in the more exposed portions. It might also be assumed that the irritant is applied to a larger surface in the sulcus than is possible in the case of the external surface of the convolutions.

These experiments, however, do not dispose of the objection which has been urged against the localization theory, that the effects produced by irritation of the cortex are not due to stimulation of ganglion-cells, but to irritation of underlying nerve-fibres, for, as is well known, previous destruction of the gray matter by cautery does not prevent the occurrence of motor phenomena when an electrical stimulus is applied to the scar. The only possible explanation of this fact is that the irritation is conducted to underlying fibres; and the fact that Prof. Luciani's experiment is more apt to succeed when applied to the deeper layers of the cortex than when the surface is irritated might also be explained as due to an irritation of these underlying fibres. While, again, as to whether these fibres arise in the cortical ganglionic cells, whether they pass through them, or whether they are entirely unconnected with them, are questions which have not yet been satisfactorily answered.

MORPHOLOGICAL CHANGES IN THE LIVER-CELLS IN DIFFERENT STATES OF ACTIVITY.

One of the most important advances in modern physiology is the connection which has been found to exist between glandular activity and various morphological changes in the glandular elements. But, while this connection has been thoroughly worked out in the case of the salivary and sweat glands, pancreas and stomach, very little is known as to the histological changes occurring under different conditions in the liver.

In 1879, Kayser (Heidenhain, *Physiol. der Absonderungsvorgänge, Handbuch der Physiologie*, i. p. 221) described the liver-cell of a fasting animal as bounded by faint lines, finely granular in character, and with an indistinct nucleus. Twelve to fourteen hours after digestion the cells are found to be filled with large glistening granules of glycogen, which are readily dissolved out by various reagents, and then leave the cell bounded by a heavy, dark border of condensed protoplasmic cell-contents, from which fibres extend to the interior of the cell to form a coarse network, previously described by Kupffer,

in which the nucleus may be distinctly seen.

In a paper read before the Royal Society, April 27, 1882, Langley considerably extended our knowledge of the changes in the hepatic cells under various conditions. He states that the spaces of the protoplasmic net-work are occupied by (1) spherical granules, probably proteid in nature; (2) spherical globules of fat; and (3) hyaline substance, partly glycogen and partly proteid in nature. In the frog, during the long winter fast, the granules are confined to the inner portions of the cells and form there a marked inner granular zone, while the glycogen increases in amount and is stored up in the outer portion of the cells, where there are no granules, the nucleus lying on the border of the two zones. Analogous changes take place when the animal is fed, confirming the general fact that similar changes occur in fasting and in digestion,—i.e., a gradual disappearance of the outer granular zone, and a deposit in that portion of the cells of glycogen.

The disappearance of granules and the formation of glycogen which take place in winter frogs are probably partly due to the low temperature; for if the frogs whose liver-cells contain much glycogen and few granules are kept for a week or so at 20° C. the cells become granular throughout, and the glycogen largely disappears.

In the fasting mammal the protoplasmic net-work stretches throughout the cell with nearly equally-sized meshes; in the spaces of the net-work is a small amount of hyaline substance, partly glycogen, and embedded in this are rather large granules. When the liver is examined six or eight hours after digestion, there is a greater or less disappearance of granules from the centre of the cell around the nucleus; the net-work here has wider spaces and thinner bars, and the spaces are for the most part filled with glycogen, while the peripheral net-work and granules make the cell appear at first as if it had a very thick wall, probably explaining this appearance as already described by Kayser. The granules, both in the liver of the frog and in the mammalian liver, Langley believes to be concerned in the formation of some of the substances found in the bile.

The most recent contribution to this subject has been published by Afanassiew (*Pflüger's Archiv*, xxx. p. 385, and *Cen-*

tralblatt für die Medicinischen Wissenschaften, No. 31, 1883).

He finds that in the liver of a fasting animal the liver-cells are small and angular, with small nuclei; their protoplasmic intercellular net-work, as well as its finely-granular contents, as proved by micro-chemical reaction, is essentially albuminous in nature. In the livers of animals fed with fibrin these general characteristics remain unaltered, with the exception that the cells are somewhat larger, the protoplasmic net-works are not so small, and the granulation is more distinct. The cell-nucleus becomes larger, and lies usually in the centre of the cell, and also is finely granular in structure. Since these cells are not stained brownish red with iodine, and since their treatment with osmic acid produces no increase in the number of oil-globules present, Afanassiew concludes that feeding with fibrin increases the granular albuminous contents of the hepatic cells.

After feeding with potatoes and sugar the cell becomes very rich in glycogen, and sections show ordinarily an absence of the protoplasmic net-work, while the cells themselves are very large and filled with coarse granules or indistinct spots. The small, sharply-contoured granules which are usually met with in the livers of fasting animals as well as after feeding with meat are almost entirely absent.

After feeding with fat, oil-globules become abundant in the liver-cells; after mixed feeding, a combination of the appearances just described may be recognized. From these researches the author concludes that when a healthy animal is allowed to fast, the liver first loses its glycogen and then a part of its water: the albumen remains the longest, though a portion breaks down into fat. As a consequence of these changes, the liver-cells become smaller.

After fibrine feeding the albuminous contents of the hepatic cells are increased both absolutely and relatively, while the amount of water present becomes relatively less: consequently the granules are more closely packed together, though the entire cell becomes somewhat larger.

In feeding with potatoes and sugar the albuminous frame-work remains unaltered in quantity, but a large number of glycogen particles are now included in its meshes, and, as a consequence, the amount of water present is increased, and the liver-

cells become large and rounded and compress the blood-capillaries and the interlobular connective-tissue spaces. Hence a glycogen liver is very large and clay-colored, while its acini are obliterated. After section of the hepatic nerves, the same appearances were noted as after albuminous feeding. The cells are moderately large, and contain in their protoplasmic meshes numerous sharply-outlined granules of albuminous nature. The borders of the cells are clearly defined, the nuclei large and finely granular, and the capillaries wide.

Since an increase in the bile-formation depends upon increase in blood-supply, it follows from the above that a high degree of glycogen-formation diminishes the secretion of bile, while, on the other hand, section of the hepatic nerves or albuminous diet must increase it.

In connection with this subject it may be mentioned that Pfeiffer (*Archiv für Microscopische Anatomie*, October 10, 1883) confirms the earlier statements of Pflüger and Kupffer as to the existence in the liver-cells of vacuoles in direct connection by means of fine, straight or slightly-curved canals with the bile-capillaries. This appearance, which has been attributed by Hering and others to extravasation of the injection mass, according to Pfeiffer is constant in its occurrence after injections of Berlin blue made under very low pressure into the gall-bladder of the guinea-pig, and is found throughout the entire extent of the injection, and not confined to single regions, as would be expected if due to extravasation.

These vacuoles are usually two or three for each cell, have a diameter of about one-fifth or one-sixth of that of the nucleus, are situated to one side of the cells, and are most numerous near the centre of an acinus. Sometimes the entire cell is injected, the mass, however, clearly lying in the interior of the cell, as it is bounded by the sharply-defined border of the cell, and never extends into contiguous cells.

The vacuoles have been found by the author in the liver-cells of guinea-pigs, of rabbits, and of a child: he believes they are of the same nature as the intracellular vacuoles described by Kupffer as occurring in the salivary glands of *Blatta Orientalis*. The idea that they are secretory in nature is supported by the fact that similar ap-

pearances were obtained by Wyss and Popoff by ligation of the bile-duct in rabbits.

THE CIRCULATION IN THE KIDNEYS.

Prof. Cohnheim and Dr. Roy (*Virchow's Archiv*, xcii. p. 424, and *Centralblatt f. d. Med. Wissens.*, No. 38, 1883) have studied the circulation in the kidney by means of the kidney-plethysmometer, an instrument previously employed by the latter for studying the changes in volume of the spleen (*Journal of Physiology*, January, 1882). This consists of a metal capsule, containing oil, in which the kidney, separated from the oil by a thin flexible membrane, is inserted: any change in the volume of the kidney will cause a displacement of a portion of the oil and a consequent ascent or descent of a column of fluid in a recording manometer connected with the interior of the capsule; changes in volume of the kidney may thus be graphically recorded. The kidney is exposed through an incision in the lumbar region, and well isolated, care, however, being taken not to disturb the parts around the hilus, and the organ is then placed in the "oncometer" (bulk-measurer), which has been previously warmed up to the body-temperature. During this experiment, the isolated kidney continues to secrete normal urine, and behaves otherwise as a perfectly normal organ. The blood-pressure throughout the course of the experiment is measured in the femoral or carotid artery.

The following are some of the most important results obtained by experiments made on curarized dogs:

1. The normal renal curve is parallel to the blood-pressure curve, and, like the latter, shows oscillations due to respiration and to ventricular systoles. Alterations in blood-pressure are reflected on the renal curve, an increase of the former causing most frequently a fall of the renal curve, thus indicating a diminution in volume of the kidney. In addition to these changes due to arterial variations, the volume of the kidney is subject to spontaneous fluctuations, which could not, however, be resolved into any general law.

2. When artificial respiration is interrupted and the blood-pressure thereby greatly increased, the volume of the kidney becomes greatly reduced. Section of the splanchnic nerves does not modify this "asphyctic contraction;" but when all the

renal nerves are divided, interruption of respiration then produces an increase in volume of the kidney which is proportional to the increase in blood-pressure produced by the same cause. The asphyctic contraction of the renal vessels is, therefore, of a vaso-motor nature. Similar results are produced by irritation of sensory nerves and in strychnia-poisoning.

3. After section of the splanchnic nerve the kidney never increases in volume: the existence, therefore, of a tonic innervation of the renal vessels through this nerve has not been confirmed. Irritation of the central or peripheral end of this nerve produces, in the former case reflexly, in the latter directly, marked reduction in the volume of the kidney, accompanied by great increase in the general arterial pressure.

In rabbits, dogs, and cats, the majority of the renal vaso-motor nerves run through the splanchnic nerve, each splanchnic nerve containing fibres for both kidneys. The fact that irritation of the peripheral end of one splanchnic nerve often causes first expansion and then contraction of the opposite kidney may be explained on this ground. Also after section of both splanchnic nerves the kidney may be contracted by reflex stimulation: hence there must be some path of vaso-motor fibres from the spinal cord to the kidney other than through the splanchnics.

4. After section of all the nerves going to the kidney, no diminution in volume can be produced either by direct or by reflex stimulation, the curve of the paralyzed kidney running perfectly parallel to that of the blood-pressure.

Dilatation of the renal vessels was never observed as a consequence of stimulation of any of the nerve-branches which enter the hilus.

5. Simultaneous observations made on both kidneys showed that these organs, as regards their circulation, were independent of each other, complete closure of one renal artery being without effect on the circulation of the other. Closure of other branches of the aorta was also without effect.

Setschenoff (*Centralblatt f. d. Med. Wissenschaften*, No. 3, 1884) calls attention to a peculiarity of the renal circulation which has as yet escaped notice, and which plays an important part in the physiological activity of this organ.

On account of the nearness of origin of the renal arteries to the commencement of the abdominal aorta, the blood enters the kidneys under a relatively very high pressure; on the other hand, on account of the entrance of the renal veins into the vena cava at a point near its termination, the blood leaves the kidneys under an extremely low pressure. And, since the path followed by the blood in the kidneys is a relatively short one, and since the pressure in the abdominal aorta and in the inferior vena cava cannot be essentially modified by alterations in the blood-current, it follows that the chief regulator of the renal circulation is the relatively high and at the same time nearly constant difference between the pressures in the abdominal aorta and the inferior vena cava.

This great difference in pressures may serve to explain the rapidity with which the renal blood-stream overcomes the resistance of a double capillary system; and, as this difference is a constant one, a middle point of pressure between the entering and leaving streams is maintained.

According to previous conceptions of the functions of the kidney, in which this relation of the renal vein to the inferior cava was disregarded, the renal secretion, which the facts above mentioned show to be due to variations in general blood-pressure, was attributed to changes in the pressure in the renal artery alone. The rapidity of blood-current, however, even in increased arterial pressure, may remain unaltered, because the absolute difference between the pressure of the entering and leaving blood-streams remains unchanged.

Thus the diminution of urinary secretion after repeated stimulations of the vagi or after section of the spinal cord has usually been explained as due to reduction of pressure in the renal arteries and consequent slowing of the blood-current in the kidneys. But, according to Setschenoff, this result is to be attributed to the increase of pressure in the venous trunks, or, what is practically the same thing, to the absolute decrease in the difference of pressures above alluded to.

THE ACTION OF SALINE CATHARTICS.

The following is a summary of a long and elaborate paper by Dr. Matthew Hay, published in the *Journal of Anatomy and Physiology* for 1882-83. A saline purgative always excites more or less secretion

from the alimentary canal, the amount of secretion varying with the nature and concentration of the salt, the bile and pancreatic juice participating very slightly. The secretion so produced is the result of glandular stimulation, and not of osmosis, though the low diffusibility of the salt impedes absorption: the fluid therefore accumulates in the intestine and acts as a mechanical purgative. If water be withheld from the diet for one or two days, purgation will not follow the administration of the salt. Usually the amount of water accumulating in the intestine under the action of a saline cathartic corresponds to the amount of water required to form a five or six per cent. solution: if therefore a solution of this strength is given, it does not increase in bulk. The weaker the solution, the more rapidly does the fluid accumulate in the alimentary canal, and consequently the sooner does purgation follow. When the salt is administered in the usual manner, it appears in the case of sulphate of magnesia and sulphate of soda to become split up in the small intestine, the acid being more rapidly absorbed than the base, and again returning to the alimentary canal. It is the salt remaining in the intestine which excites secretion, the absorbed or excreted acid exerting no such action whilst in the blood or during the process of excretion. The salt does not purge when injected subcutaneously or into the blood, and does not excite intestinal secretion unless as a consequence of the local disturbance which follows the injection. The sulphate of soda is not poisonous when injected into the blood; the sulphate of magnesia is, however, powerfully toxic.

MUSICAL MURMURS OF THE HEART.

BY HUGO ENGEL, M.D.

MAY 6, 1882; A. S., æt. 51, weissbeerbrewer, came to my office for professional advice. Family history obscure; personal history as follows. Never had malaria, no constitutional lues, no scrofula. Five or six times he had been affected with blennorrhœa of a specific character; he believed himself even now not to be free from it, notwithstanding that he was married and the father of ten children, and although he had not committed adultery for a number of years. Twice had he suffered from acute articular rheuma-

tism; during the last attack, some five years ago, on the sixth day of the malady, he had been suddenly seized with great difficulty of breathing, an intense pain in the region of the heart, and vomiting; a peculiar anxious feeling had come over him, as if he were going to die, and he had felt a restlessness almost unbearable. His physician had told him that the rheumatism had affected his heart. All his present symptoms he dated from that time.

He, since, had never been free from pains, either in his shoulders or in his hips, in his wrists or in his ankles. There was always some pain at some one of these localities. But he had noticed one remarkable fact: whenever he observed a discharge from his urethra the pains ceased, to return immediately on the discharge ceasing. He suffered a great deal from dyspepsia, had sour eructations, a sensation of a heavy weight in the epigastrium, no appetite, and complained of flatulence which was so severe that he was often attacked by colicky pains, yielding only when he was relieved of the gas. His most annoying symptom, however, was dyspnoea: this came on at the least exertion, after a mental excitement, and at night, when for a number of hours it prevented him from sleeping. He was constipated; there would often have been no motion of the bowels for a week if he had not taken a purgative. St. Germain tea (a composition consisting mainly of senna-leaves) was his usual remedy. Palpitation of the heart troubled him often. Sometimes he had giddy sensations, when generally it seemed to him as if he were going to faint.

Status præsens.—The patient is about six feet tall, of very bony but slim appearance; has a cachectic look. The skin of his face has a great similarity to parchment, and is clammy. The urine contains a moderate amount of albumen, no tube-casts, no sugar; the pulse is characteristic of aortic disease. His tongue is flabby and coated. On percussion, liver and spleen are found to be slightly enlarged, the stomach dilated, the abdomen unusually tympanitic, distended by gas; the lungs are normal as regards percussion-resonance. The heart is increased in width on both sides, more on the left; the impulse is felt over several interspaces, and is slightly heaving. On palpation, between the second and third ribs, to the right of, or rather under, the sternum, a peculiar sensation is imparted to the palm of the hand: it is somewhat like the purring of a cat, but with a larger wave of the single pur, if I may thus express it; it seems to be synchronous with the beat of the heart, with the systole. On auscultation, some râles are heard over the chest, indicating some mild bronchial trouble. There is a murmur to be perceived over the heart; its point of greatest intensity is between the second and third ribs, directly under the sternum, near its right edge, and nearer to the second rib. The murmur takes the place of the first sound.

The most interesting phenomenon, however, is a peculiar musical sound, like whistling in a high octave. It appears at the end of the murmur, or, to state it perhaps more correctly, the harsh murmur ends in this whistling. The latter is so loud, so distinct, that at a distance of a little over three feet from the patient in a quiet room it can plainly be perceived.

I made the diagnosis of insufficiency of the aortic valve, with dilated hypertrophy, but the latter ceasing to be compensating and the final end being near. Regarding the musical sound, I imagined that a fine sinew-band, the result of the endocardial inflammation from which the patient had suffered during his second and last attacks of acute articular rheumatism, was attached somewhere to the wall of the aorta near its semilunar valves, that this sinew became stretched at the moment when the blood, after having, during systole, been driven through the semilunar valves, and obeying the elastic recoil of the walls of the aorta, was regurgitating, and that in this manner, the return-flow of the blood stretching the fine sinew, the musical sound was produced. If we remember that a very slight atheromatous thickening, the least syphilitic or other excrescence impeding the flow of the blood, may cause the harshest murmur all over the heart, why should not a fine elastic and thin membrane just as well obey the law of sounds and create, when stretched, a musical note? Certainly this reasoning was based upon knowledge of what had been found at the post-mortem of other cases; but of that later.

The man lived nine weeks longer. During the last three days, which the patient was able to pass in the recumbent position (before he had been half sitting), the musical sound disappeared and the murmur became less loud and less harsh. I think all these facts—the possibility of resting in the recumbent position, the disappearance of the whistling, and the diminution of the murmur—were due to one and the same cause. The circulation had decreased so much in activity, had become so weak, that respiration was less disturbed, and the current of blood had not sufficient force left to cause the former variations of sound.

At the post-mortem examination I found what, after the description given above, one had reason to expect. Nothing was, therefore, of any interest except the condition

of the aortic valves. And here the following was met with. The posterior pocket had become totally adherent, and from its nodule a very fine, sinew-like, fibrous band stretched itself to the farther end of the pocket on the right side, to which it was attached. It was white and shiny as the valve itself, and, when I saw it, it hung down loose; but I could well imagine how, under the circumstances mentioned before, the regurgitating current of the blood caused the membrane to stretch, and produced by the ensuing vibrations of the latter the whistling sound.

The fact that such musical sounds may originate in the heart without other anatomical alterations causing them than abnormal fibrous bands was first demonstrated by Hamerujk.* Formerly it was thought that such sounds could be produced only in the arteries. Laennec makes this statement, and adds that he himself has never met with such a *bruit* in the heart; under *souffle musical* he evidently classed not only the sounds caused in the arteries by compression, but also those we so frequently hear in veins. In later times, many such cases of musical sounds in the heart have been reported, but the subject was dropped, until Prof. Schroetter, of Vienna,† in a highly interesting article has again drawn the attention especially of clinicians to this phenomenon.

From a diagnostic point of view, these sounds are of importance to physicians, and, as English medical literature has recently contained very little on this subject, we will mention succinctly what at present is known about it, and add the latest researches of Schroetter.

Bamberger was the first of the great German authorities to adopt Hamerujk's view that these musical sounds are caused by the vibration of these abnormal fibrous bands (*Sehnensfäden*), and Schroetter, who has done a great deal to clear up such difficult questions, thinks that the acoustic character of the phenomenon is proof of the assertion. These sounds are always like a very high-keyed whistling, or oftener like whistling in the highest octave possible, and may be compared to the sound produced by the string of a violin vibrating when at its

greatest tension. Usually the sound is heard over the left ventricle at the moment of systole.

Küchenmeister endeavored to explain the phenomenon by the serous infiltration of the chordæ tendineæ and the papillary muscles. The facts are opposed to this view: such conditions alone have never been known to cause the sound,‡ and the law of acoustics would never explain it; the infiltration would bring the normal sound a few octaves deeper. The objection raised by Friedreich that fibrous bands stretched across the ventricular cavity would relax in consequence of the diminution in the lumen of the latter during systole, and could, therefore, not originate a sound, is refuted by Schroetter, as follows: (1) Other anatomical changes are not present to explain the phenomenon; (2) the character of the sound, which could only be produced by the vibration of a very fine membranous tissue, such as a thread; (3) the fibrous band is by no means stretched transversely, but is bent at the moment of systole more or less upwards; (4) the sound is not always equally loud, because the vibrating membrane does not invariably assume the position most favorable to its production; (5) the phenomenon disappears as soon as the fibrous band becomes torn. I can add another point to this argument, which seems utterly to have escaped the sagacity of the two eminent disputants: a current of blood of sufficient strength to cause any loud sound by passing over so small a membrane and in so small a space as the valves occupy in the ventricles, a current forcible enough to produce a harsh murmur when flowing over a small vegetation, will surely be able of itself to create a tension in so small a band as these fibrous strings always are; the *vis a tergo* pushing the first part of the fluid, the pressure behind it will force the membrane to stretch; the remainder of the fluid, obeying the same impetus, brings out the sound. In proof of this, I refer to my own case. The fibrous band was three months before death the same as two days before; but the force of the blood-current was reduced nine-tenths; and, as a consequence, the musical sound ceased.

In support of the argument of Schroet-

* Med. Jahrb., Wien, Bd. xlv, 1843.

† Prof. Schroetter, Vienna, Wiener Med. Blätter, No. 1, 1883. The historic facts and the theoretical views of the authors cited, as well as the professor's own valuable observations, the writer has translated from the original article.

‡ I have not been able, in the literature on this subject at my command, to detect a single instance where a musical sound had been produced and the infiltration mentioned found as the only cause of the phenomenon.

ter, he mentions the following case, which Zuckerkandl published years ago. Over the left ventricle of a man, æt. 40, there was heard, besides a systolic, blowing murmur, a highly musical sound, which could best be compared to a whistling. Diagnosis: a fibrous band stretched across the ventricular cavity. Prosector Prof. Scheut-hauer made the post-mortem. Schroetter had specially called his attention to the probable existence of the band, so that the latter during dissection should not be torn,—an accident that happens only too easily, and that is almost sure to take place if not guarded against. In the left cavity, in fact, was found the finest fibrous band imaginable, twenty-five millimetres long, stretching from the anterior to the posterior wall, and, with the exception of its two ends, which were tightly adherent to the endocardium, hanging free in the ventricle.

Many cases have since (seventeen years ago) been noted by Prof. Schroetter and others* where a systolic musical murmur of high pitch was perceived over the left ventricle, and where a fibrous band in a favorable position to originate such a sound was proved to have been the cause of the latter. That in consequence of endocarditis one end of a tendinous band may be torn off, and, carried along by the blood-current, become adherent at the opposite side, cannot be denied; my own case, perhaps, is an evidence of this fact.

Schroetter's views were of the kind related, till recently, during a visit at the Vienna Institution for the Insane,† he perceived a musical murmur in a patient as soon as he brought his head near the chest. Thinking of a possible fibrous band, he examined more carefully, and found that the murmur in this case happened during diastole, and, to judge from its point of greatest intensity, was located at the aortic valve. As all the usual symptoms and signs pointed to aortic insufficiency, he attributed the existence of the musical sound to the same lesion, without being able to give an explanation of the peculiar timbre of the *bruit*. Some time later, he saw the patient again,—moribund. The post-mortem demonstrated the insufficiency of the aortic valve; the atheromatous process

being most strongly developed at the root of the vessel, the three semilunar valves were decidedly thickened at their free margin, and the one on the right side had become adherent to the one in the middle.

The closer inspection of the diseased valve brought to view the fact that the posterior pocket was perforated in its free edge, and in such a manner that upwards and from right to left, gradually becoming thinner, a very fine border, actually filiform, ten millimetres long, was totally separated from the remainder of the pocket. He had, therefore, here not to do with an abnormal, fibrous new formation, which, as a result of an inflammation with plastic exudation, had become organized and finally adherent, to form a fibrous band of adhesion; but a minute part of a normal tissue, the latter, however, diseased, had by a morbid process become separated, and so effectually that it served perfectly the purposes herein indicated of such a fibrous band.

Schroetter believes‡ that this fibrous thread in the opening left free by the insufficiency of the aortic valves, and at the moment diastole commenced, was set vibrating in the regurgitating current of the blood, and in consequence of its thinness caused the musical sound of so high a pitch. As a further proof of the correctness of this view is mentioned the fact that the thread was longer than the right edge of the pocket, and that it was bent at an angle near its left end. The thread was therefore, in Schroetter's opinion, drawn out to its full length and brought into highest tension undoubtedly only at times, surely, however, during the act of diastole, or rather at the moment the latter set in.

Prof. Schroetter since has occasionally had the opportunity of hearing the same musical sound, but not of verifying his diagnosis by a post-mortem. My own case was then not published, though the winter before Mr. S. came to my office he had presented himself at my clinic, and, as I then was lecturing on diseases of the heart, I introduced the case to the class as one of aortic insufficiency, in which probably in some way a fine adhesion, elastic in character, had formed and given rise to the musical phenomenon. I then gave the fol-

* How little attention has been paid in our country to the origin of musical murmurs caused in the manner described, may be judged from the fact that Da Costa in his "Medical Diagnosis" (fifth and latest edition) makes no mention of it.

† Wiener Irrenanstalt.

‡ Vide Allgem. Med. Central Zeitung, No. 6, 1883, page 71, where the investigations of Prof. Schroetter are reported from the source cited above, and which served as original for the parts translated.

lowing explanation. We all know that a flapping noise sometimes is perceived in aortic valvular lesions. This is caused by a semilunar valve being torn in such a manner as to allow the free end to be wafted to and fro by the blood-current. A little reflection might show that if the torn-off end is very fine, and becomes adherent to the opposite side, a new sound will be produced, and, according to the law of acoustics and of analogy, any sound during systole, if caused by a fibrous band in the ventricle, will be a musical sound and in a high octave,—the conditions, an elastic substance, thin, of certain length, adhering only at the ends, and in a position to be in the way of the current, being known to exist.

Theory and practice would here seem to agree. But a negative case, in which during life the usual scraping murmur during diastole was heard over the seat of the aortic valve, has added, according to Schroetter, another proof.* On the posterior valve towards the right side a large perforation was formed, terminating upwards in a slender thread six millimetres in length. Why was there not here heard a musical murmur, and the more so as no special roughness existed? The right and posterior valves were adherent to each other by a strong bridge; in consequence of this, the fibrous thread passed through the *sinus Valsalvæ* of the posterior valve, and could, therefore, not be set into vibration by the blood-current regurgitating back to the left ventricle.

Besides my own case, in which I preferred, however, to give a slightly different explanation by supposing the *normal* regurgitation to have caused the vibration, and the latter to have induced the *post-systolic* musical sound, or—if preferred—the *pre-diastolic*, other observations have proved the correctness of Prof. Schroetter's statements. He mentions the following cases himself in support of his assertions:

Oettinger perceived over the aorta of a fifteen-year-old boy immediately after systole a prolonged, almost musical, sound, like the humming of a bass-viol, terminating sharply at the beginning of the perfectly pure diastolic sound. No post-mortem; but several fibrous bands were supposed by Oettinger to have been stretched across the orifice of the aorta.

Archer heard over the aortic valve a musical sound during systole. The necropsy showed a tendinous string stretched from the nodulus Arantii of the left semilunar valve across the aorta and adhering to the opposite wall.

September 23, 1882, a patient in Schroetter's ward had a prolonged scraping diastolic murmur over the aorta. The symptoms for which the patient had sought alleviation in the hospital improved, and he went away, to return, however, three weeks later. The murmur had meanwhile undergone a remarkable change. In the middle of it could be perceived a "beautiful musical sound of high pitch." At the post-mortem the left semilunar valve was found cicatricially contracted and retracted, the right covered with excrescences, partly of areolar, partly of calcareous nature, in its commissure bound down; the posterior valve perforated in such a manner that upwards a border was left free which was sixteen millimetres long, nearly one and a half millimetre wide, and totally separated from the lower part of the pocket; fresh endocarditic vegetations covered it all over.

There can be no doubt about Schroetter's being correct in his supposition that the musical nature of the organic murmur in this case developed itself when in consequence of a recent attack of endocarditis the semilunar valve became perforated, so that a part of it, slender and elastic, while its two ends were still attached to allow of tension, could by itself swing in the blood-current, and, being set in vibration, cause the musical sound.

The more we are able to present to our mind a clear picture of a morbid lesion, the more readily we can interpret any symptom or sign; the more we appreciate the importance of an exact diagnosis in its details, the more rapid our progress in therapeutics will be, and the more definite and reliable our prognosis, especially *quoad vitam* and concerning the mode of death. The more fully this course is followed, the quieter will be our conscience in the conviction that what in a given case human ingenuity could achieve has been done faithfully and without wavering, and that, with regard to diagnosis, therapeutics, and prognosis, there was no doubt at any period of the case.

* Loc. cit., p. 86, No. 7.

CLINICAL ASPECTS OF CEREBRAL SYPHILIS.

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(Read before the College of Physicians of Philadelphia, February 6, 1884.)

IN the present article I propose to say very little in regard to the lesions of cerebral syphilis, only making such allusions as are necessary to the clinical study. So much practical importance attaches to the etiological relations of the disorder that I shall discuss these at some length.

We do not know why syphilis attacks one portion of the brain rather than another in any individual case; indeed, very rarely can we give any sufficient explanation why the brain is affected at all.

It is naturally to be expected that any cause of ordinary brain-inflammation would, when present in a syphilitic person, tend to precipitate a specific cerebral disease. Thus, as thermic fever frequently provokes chronic meningitis, much plausibility attaches to the report of a case in the *Fourn. de Méd. et Chir. prat.*, Paris, 1879, p. 291, where the cerebral syphilis is ascribed to a sunstroke. Blows and other traumatisms would, in a similar manner, be supposed to figure largely as exciting causes of brain syphilis; but I have never met with a case having such relations, and reports of them are rare in literature. The only records I have found are the cases reported by Dr. Broadbent, *London Lancet*, 1876, ii. p. 741, and a small collection in Heubner's article on Nervous Syphilis, in Ziemmsen's *Cyclopædia*, xii. 301. I have seen two cases of presumably traumatic spinal syphilis,—one in which a polio-myelitis* followed a fall on the ice, and one in which, after a fall from a cart and marked spinal concussion, a local myelitis developed. (*Univers. Hosp. Dispens. Service Book*, x., 1875, p. 58.)

Various authorities attach much influence to over-study and other forms of cerebral strain in exciting brain syphilis. Engelstedt is stated to have reported cases

having such etiological relations, and Fournier (*La Syphilis du Cerveau*) affirms that he has especially seen the disease in professional men and other persons habitually exercising their brains to excess. Neither in private nor in public practice have I met with any instance where over-brain-work could be considered a distinct etiological factor, whilst the wards of the Philadelphia Hospital and the roll of the University Dispensary are full of cases occurring in persons who use not at all the modicum of brains nature has endowed them with. So far as my observation goes, cases of brain syphilis in which any exciting cause can be found are very rare.

The inherited diathesis is less prone to manifest itself in the nervous system than in other portions of the body, but it certainly is capable of causing every type of nervous disease that follows infection from impure coition.

As early as 1779, Dr. Joseph Glenck (*Doctrina de Morbis Venereis*, Vienna) reported a case of a girl, six years old, cured by a mercurial course of an epilepsy of three years' standing, and of other manifestations of hereditary syphilis. Graefe found gummatous tumors in the cerebrum of a child nearly two years old. (*Arch. f. Ophthalm.*, Bd. i., erst. Abth.) Prof. O. Heubner (*Virchow's Archiv*, Bd. lxxxiv. 269) details the occurrence of pachymeningitis hæmorrhagica in a syphilitic infant under a year old. Dr. Hans Chiari (*Wien. Med. Wochenschrift*, xxxi., 1881, 17) reports a case in which very pronounced syphilitic degeneration of the brain-vessels was found in a child fourteen months old. Both Dr. Barlow (*Lond. Patholog. Soc. Trans.*, 1877) and Dr. T. S. Dowse (*The Brain and its Diseases*, vol. i. p. 76) report cases of nerve syphilis in male infants of fifteen months.

It is a matter of great interest to know how late in life nervous disease from inherited taint may develop. We have as yet little light upon the equally interesting and cognate problem as to how far inherited syphilis may produce late in life nervous diseases whose type is not distinctly specific; but it is probable that even after puberty specific nervous affections may appear for the first time in the unfortunate offspring of syphilitic parents. Mr. Nettleship reports (*Trans. Lond. Path. Soc.*, xxxii. 13) the development of a cerebral gumma in a girl of ten years, and Mr. J.

* In this case the man had symmetrical specific skin eruptions upon the arm, and the symptoms were peculiarly symmetrical: great coldness of both forearms; excessive sweating of the palms; loss of power, so much more pronounced in the extensors than elsewhere that the patient had been treated for lead-poisoning, and great wasting of the extensor muscles. Evidently a symmetrical syphilis chiefly confined to the anterior spinal cornua.

A. Ormerod (*ibid.*, p. 14) of a tumor of the median nerve (probably gummatous) in a woman of twenty-three, both the subjects of inherited syphilis. Dr. Thomas S. Dowse (*loc. cit.*, p. 71) details a case of cerebral gumma at the age of ten years, and Dr. Samuel Wilks (*Lectures on Dis. of Nerv. Syst.*, Philad., 1878, p. 333) one of epilepsy from inherited taint in a boy of fourteen. Dr. I. Hughlings Jackson reports (*Fourn. Ment. and Nerv. Diseases*, 1875, p. 516) paraplegia with epilepsy in a boy of eight, hemiplegia in a girl of eighteen, and in the *Brit. Med. Journal*, May 18, 1872, hemiplegia in a woman of twenty-two; the nervous affection in each case being associated with or dependent upon inherited syphilis. Dr. E. Mendel reports (*Archiv f. Psychiatrie*, Bd. i. 313) a case of a child who had inherited syphilis, and developed in her fifteenth year a maniacal attack with hallucinations.

Some time since, I saw, in an orphan of fourteen, a chronic basal meningitis, and, in the absence of any history, gave the fatal prognosis of tubercular disease, but to my astonishment, under the long-continued use of iodide of potassium, complete recovery occurred. No signs of inherited syphilis were perceptible, but the specific nature of the inflammation is, in view of the result, scarcely doubtful. It is probable that in some of the reported cases of alleged recovery from tubercular meningitis the affection has really been syphilitic.

The relation of inherited syphilis to idiocy appears to be a close one. What rôle the diathesis has in the production of those cases which are dependent upon arrest of development we have no way at present of knowing, but that it very frequently causes chronic hydrocephalus seems to be well established. A number of cases have been reported; they have been collected by Dr. E. Mendel, *Archiv f. Psychiatrie*, Bd. i. 309. For a very important paper, see also *Virchow's Archiv*, Bd. xxxviii. p. 129.

Nervous diseases following acquired syphilitic infection certainly belong to the advanced stages of the disorder. Heubner reports (*Ziemssen's Cyclopædia*, xii. 298, New York edition) a case in which thirty years elapsed between the contraction of the chancre and the nervous explosion. I have seen a similar period of thirty years. Fournier reports intervals

of twenty-five years, and thinks that from the third to the tenth year is the period of maximum frequency of nerve-accidents.

The fact that cerebral syphilis may occur many years after the cessation of all evidence of the diathesis is one of great practical importance, especially when taken in conjunction with the circumstance that the nervous system is more prone to be attacked when the secondaries have been very light than when the earlier manifestations have been severe. I have repeatedly seen nerve syphilis in persons whose secondaries have been so slight as to have been entirely overlooked or forgotten, and who honestly asserted that they never had had syphilis, although they acknowledged to gonorrhœa or to repeated exposure, and confessed that their asserted exemption was due to good fortune rather than to chastity.

To show that my experience is not peculiar, I may be allowed to make the following citations. Dr. Dowse (*The Brain and its Diseases*, London, 1879, vol. i. p. 7) says, "Often have I had patients totally ignorant of having at any time acquired or experienced the signs or symptoms of syphilis in its primary and secondary stages, yet the sequelæ have been made manifest in many ways; particularly in many of the obscure diseases of the nervous system." Dr. Buzzard (*Syphilitic Nervous Affections*, London, 1874, p. 80) reports a case of nervous syphilis where the patient was unconscious of the previous existence of a chancre or of any secondaries. Prof. Rinecker also calls attention (*Archiv f. Psychiatrie*, vii. p. 241) to the frequency of nervous syphilis in persons who afford no distinct history of secondary symptoms.

This frequent absence of history of specific infection is of great practical importance, and has led me to attach comparatively little weight to the statements of patients. In private practice I usually avoid asking questions which might bring up from the past unpleasant memories, and arrive at the diagnosis by studying the symptoms present.

Although syphilis is most prone to attack the nervous system many years after infection, it would be a fatal mistake to suppose that brain-disease may not rapidly follow the occurrence of a chancre. What is the minimum possible intermediate period we do not know, but it is certainly

very brief, as is shown by the following cases of this so-called precocious cerebral syphilis. Dr. Alfrik Ljunggrén, of Stockholm, reports (*Archiv f. Dermatol. und Syphilis*, 1870, ii. p. 155) the case of H. R., who had a rapidly-healed chancre in March, followed in May of the same year by a severe headache, mental confusion, and giddiness. Early in July H. R. had an epileptic attack, but he was finally cured by active anti-syphilitic treatment. Although the history is not explicit, the nervous symptoms appear to have preceded the development of distinct secondaries other than rheumatic pains.

Davaine is said (Buzzard, *Syphilitic Nervous Affections*, London, 1874) to have seen paralysis of the portio dura "a month after the first symptoms of constitutional syphilis." Dr. E. Leyden (*Zeitschrift f. Klin. Med.*, Bd. v. 165) found advanced specific degeneration of the cerebral arteries in a man who had contracted syphilis one year previously. Dr. R. W. Taylor details a case in which epilepsy occurred five months after the infection (*Four. Nervous and Mental Dis.*, 1876, p. 38). In the case of M. X., reported by Dr. Ad. Schwarz (*De l'Hémiplégie syphilitique précoce*, Inaug. Diss., Paris, 1880), headache came on the fortieth day after the appearance of the primary sore, and a hemiplegia upon the forty-sixth day. S. L. (*ibid.*) had a paralytic stroke without prodromes, six months after the chancre. A. P. L. (*ibid.*) had an apoplectic attack seven months after the chancre: A. S., one five months after her chancre. In a case which recently occurred in the practice of Dr. A. Sydney Roberts, of this city, the chancre appeared after a period of incubation of twenty-six days, and two months and eight days subsequent to this came the first fit; eight days after the first the second convulsion occurred, with a distinct aura, which preceded by some minutes the unconsciousness. The further details of this case are not germane to the present discussion, which only requires the additional statement that the attack developed into an unmistakable cerebral syphilis with temporary aphasia, and that convalescence was finally secured by active anti-syphilitic treatment. As the first paroxysm came on without warning, whilst the man was fishing in the sun, it is not unwarrantable to suppose that a precocious cerebral syphilis was in this case

precipitated by exposure to the ordinary causes of sunstroke. This list of cases might be much extended, but it certainly is sufficient to show that cerebral syphilis occurs not very rarely within six months after infection, and may be present in two months.

An interesting observation in this connection is that of Dr. Ern. Gaucher (*Revue de Méd.*, 1882, ii. 678) of a spinal syphilis occurring six months after the appearance of a chancre.

Syphilographers are in accord in regard to the existence of two pathological varieties of brain syphilis, while some authorities believe in a third form. The most common seat of attack is the membranes; next to these are the brain-vessels; while, as already intimated, there is a difference of opinion as to whether the disease ever directly affects the brain-tissue. Reasons will be given later on for believing that the brain-substance may suffer violence from syphilis; but I shall first discuss the clinical aspects of specific disease of the membranes.

DISEASE OF BRAIN-MEMBRANES.

Specific affections of the brain-membranes very often declare themselves with great suddenness. The records of the disease present case after case in which an apoplectic attack, a convulsive paroxysm, a violent mania, or a paralytic stroke has been the first detected evidence of syphilitic cerebral disease. On the other hand, in many instances the symptoms come on slowly and successively. Proper treatment, instituted at an early stage, is usually successful, so that a careful study of these prodromes is most important. They are generally such as denote cerebral disturbance, and, although they should excite suspicion, are not diagnostic, except as occurring in connection with a specific history or under suspicious circumstances.

Headache, slight failure of memory, unwonted slowness of speech, general lassitude, and especially lack of willingness to mental exertion, sleeplessness or excessive somnolence, attacks of momentary giddiness, vertiginous feelings when straining at stool, yelling, or in any way disturbing the cerebral circulation, alteration of disposition,—any of these, and *a fortiori* several of them, occurring in a syphilitic subject, should be the immediate signal of

alarm, and lead to the examination of the optic disks, for in some cases the eye-ground will be found altered even during the prodromic stage. Of course, if choked disk be found, the diagnosis becomes practically fixed; but the absence of choked disk is no proof that the patient is not suffering from cerebral syphilis. In regard to the individual prodromic symptoms, my own experience does not lend especial importance to any one of them; although, perhaps, headache is most common. There is one symptom which may occur during the prodromic stage of cerebral syphilis, but is more frequent at a later stage,—a symptom which is not absolutely characteristic of the disease, but which, when it occurs in a person who is not hysterical, should give rise to the strongest suspicion. I refer to the occurrence of repeated, partial, passing palsies. A momentary weakness of one arm, a slight drawing of the face disappearing in a few hours, a temporary dragging of the toe, a partial aphasia which appears and disappears, a squint which to-morrow leaves no trace, may be due to a non-specific brain tumor, to miliary cerebral aneurisms, or to some other non-specific affection; but in the great majority of cases where such phenomena occur repeatedly, the patient is suffering from syphilis or from hysteria.

The first type or variety of the fully-formed syphilitic meningeal disease to which attention is here directed is that of an *acute meningitis*. I am much inclined to doubt whether an acute syphilitic meningitis can ever develop as a primary lesion; whether it must not always be preceded by a chronic meningitis or by the formation of a gummatus tumor; but it is very certain that acute meningitis may develop when there have been no apparent symptoms, and may, therefore, seem to be abrupt in its onset. Some years ago I saw, in consultation, a man who, in the midst of apparent health, was attacked by violent meningeal convulsions, with distinct evidences of acute meningitis. He was apparently saved from death by very heroic venesection, but after his return to consciousness developed very rapidly a partial hemiplegia, showing that a latent gumma had probably preceded the acute attack. On the other hand, an acute attack is liable at any time to supervene upon a chronic syphilitic meningitis.

At the University Hospital Dispensary, I once diagnosed chronic cerebral syphilis in a patient who the next day was seized with violent delirium, with convulsions and typical evidences of acute meningitis, and died four or five days afterwards. At the autopsy an acute meningitis was found to have been engrafted on a chronic specific lesion of a similar character. In the case reported by Dr. Gamel (*Tumeurs gommeuses du Cerveau*, Inaug. Diss., Montpellier, 1875), in which intense headache, fever, and delirium came on abruptly in an old syphilitic subject and ended in general palsy and death, the symptoms were found to depend upon an acute meningitis secondary to a large gumma.

In this connection may well be cited the observation of Dr. Molinier (*Revue Méd. de Toulouse*, xiv., 1880, 341), in which violent delirium, convulsions, and coma occurred suddenly. A very curious case is reported by Dr. D. A. Zambaco (*Des Affections nerveuses syphilitiques*, Paris, 1862, p. 485), in which attacks simulating those of acute meningitis appear to have been produced in a man with cerebral gummatus tumor by a malarial complication. In such a case the diagnosis of a malarial paroxysm could only be made by the presence of the cold stage, the transient nature of the attack, its going off with a sweat, its periodical recurrence, and the therapeutic effect on it of quinine.

In the cases of *chronic meningeal syphilis* which have come under my observation, most usually after a greater or less continuance of prodromes, such as have been mentioned, epileptic attacks have occurred with a hemiplegia, or a monoplegia, which is almost invariably incomplete and usually progressive; very frequently diplopia is manifested before the epilepsy, and on careful examination is found to be due to weakness of some of the ocular muscles. Not rarely oculo-motor palsy is an early and pronounced symptom, and a marked paralytic squint is very common. Along with the development of these symptoms there is almost always distinct failure of the general health, and progressive intellectual deterioration, as shown by loss of memory, failure of the power to fix the attention, mental bewilderment, and, perhaps, aphasia. If the case convalesce under treatment, the amelioration is gradual, the patient travelling slowly up the road he

has come down. If the case end fatally, it is usually by a gradual sinking into complete nerve-paralysis, or the patient is carried off by an acute inflammatory exacerbation, or, as I saw in one case, amelioration may be rapidly occurring, and a very violent epileptic fit produce a sudden asphyxia. In this form of cerebral syphilis, death from brain-softening around the tumor is not infrequent; but a fatal apoplectic hemorrhage is rare.

The clinical varieties of cerebral meningeal syphilis are so polymorphic and kaleidoscopic that it is almost impossible to reduce them to order for descriptive purposes. Prof. Fournier separates them into the cephalic, congestive, epileptic, aphasic, mental, and paralytic, but scarcely facilitates description by so doing. Heubner makes the following types:

"1. Psychical disturbances, with epilepsy, incomplete paralysis (seldom of the cranial nerves), and a final comatose condition usually of short duration.

"2. Genuine apoplectic attacks, with succeeding hemiplegia, in connection with peculiar somnolent conditions, occurring in often-repeated episodes; frequently phenomena of unilateral irritation, and generally at the same time paralyzes of the cerebral nerves.

"3. Course of the cerebral disease similar to paralytica dementia."

In regard to these types, the latter seems to me clear and well defined, but contains those cases which I shall discuss under the head of cortical disease.

Meningeal syphilis as seen in this country does not conform rigidly with the other asserted types, although there is this much of agreement, that when the epilepsy is pronounced, the basal cranial nerves are not usually paralyzed, the reason of this being that epilepsy is especially produced when the gummatous change is in the ventricles or on the upper cortex. In basal affections, the epileptoid spells, if they occur at all, are usually of the form of petit mal; but this rule is general, not absolute. The apoplectic somnolent form of cerebral syphilis, for some reason, is rare in this city; and it seems necessary to add to those of Prof. Heubner's a fourth type to which a large proportion of our cases conform. This type I would characterize as follows:

4. Psychical disturbance without complete epileptic convulsions, associated with

palsy of the basal nerves and often with partial hemiplegia.

(To be continued.)

ON THE VALUE OF NATURAL COMPARED WITH ARTIFICIAL REMEDIES IN THE TREATMENT OF DISEASE.

BY ROBERT R. TAYLOR, M.D.

SEEING in one of our late medical journals the report of a case of severe hemorrhage from the kidney successfully treated by an unusual remedy, I thought I would report several cases of disease of a grave nature which came under my observation last summer at Capon Springs, which were treated successfully by a natural, if not an unusual, remedy.

Case I.—A married lady, about 28 years of age, the mother of one child, born after a lingering and difficult labor, to which the cystitis may have been due, consulted me on account of chronic inflammation of the bladder of two years' standing. She had been treated by several physicians in Pittsburgh *secundum artem*, but without any permanent benefit, the disease growing constantly worse. Being advised by her attending physician, she determined to try Capon water, and came to the Springs about July 1. When she consulted me, her general appearance was pale and anæmic; she was suffering almost constant pain, and had no relief except from laudanum enemata thrown into the bladder. She passed water frequently, which was loaded with pus and mucus, and was, as she said, totally unfitted for the duties of life.

I ordered her to drink freely of the water, from six to ten glasses daily, to take a daily hot bath (100° F.), with two hours' rest afterwards, to wash out the bladder every day with the water, and to abstain as much as possible from the use of the laudanum. This, with a plain, nutritious diet, was the sole treatment.

At the end of two months the patient returned home, her urine normal, with no trace of pus, only a slight one of mucus, and no need of anodynes, having gained sixteen pounds in weight. She promised to write me if she had any return of the disease. Not having done so, I presume she continues well.

Case II. was a gentleman about 35 years of age. I found him in bed, suffering intensely, having had but little sleep the previous night. He was very fleshy, weighing nearly three hundred pounds. Said he had been treated in Baltimore and other cities for

secondary syphilis, but stated that he had never had sore throat, alopecia, or condylomata, which statement was verified on physical examination. His body and limbs were covered with a scaly pustular eruption, with surrounding discoloration, but not of a copper hue. His lower extremities were much swollen and inflamed, and were the cause of his present suffering.

I ordered his limbs elevated and to be kept wet with an anodyne, saturnine, Capon-water lotion, and gave a free sulph. magnesia purge. In two days the local trouble had subsided. I then told him that my diagnosis of his case was not syphilis, but eczema pustulosum. I ordered him on strict diet, no stimulants of any kind; to drink freely of the water; to take a hot bath night and morning (100° to 105° F.), and to apply at night a vaselate of starch. At the expiration of two months this case was comparatively well, and, having to leave to attend to business, I advised him to try, if possible, to spend two weeks at the White Sulphur Springs, for the sake of the baths.

Case III.—A gentleman from New York, about 60 years of age, came to Capon on account of albuminuria in early stage. After six weeks' use of the water, all trace of albumen had disappeared from his urine, and he left for Long Branch.

I also had under observation two cases of albuminuria consequent on scarlet fever, both of which were entirely cured in three weeks.

My object in reporting these cases is to call attention to an easily-obtained natural remedy proving entirely successful where skilful physicians with the best pharmaceutical remedies had failed.

2129 PINE STREET, PHILADELPHIA.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF PROF. H. C. WOOD.

EPILEPTIFORM ATTACKS REPLACED BY SPASM OF THE FACIAL, HYPOGLOSSAL, AND SPINAL ACCESSORY NERVES—CURE.

THE first case which I have to show you to-day is one of considerable interest in many ways, and is a somewhat peculiar one.

Our patient is a colored man, who was in fair health until July last. On the 1st of July his head was suddenly drawn to the left, then the whole body became involved in contractions, and after this had continued for some time he dropped down and became unconscious. It was a primary

epileptiform attack, which came on without apparent cause, and has been followed by attacks the character of which you see at present. [The patient had several of his spells during the time he was in the clinic.] His first spell he had three or four days after the epileptiform manifestation, and they have continued ever since.

During these attacks the head moves a little. There is a condition of spasm of the muscles of the left side of the face. By watching the case carefully, we find that it is the muscles of expression which are involved. He has tonic followed by clonic contractions, which affect the distribution of the facial nerve. There are two nerves which supply the face and jaws, the facial and the trigeminal,—the facial supplying the muscles of expression, while the trigeminal supplies only the pterygoid, masseter, and temporal muscles,—the muscles of mastication. The jaws appear to be quiet in the fit, and the spasm is confined to the facial nerve distribution. The whole left side of the face is in the condition of tic or spasm.

There are two varieties of tic, the painless and the tic douloureux,—the first being confined to the facial nerve, while the second involves also the trigeminal nerve, occasioning a sensory explosion at the time of motor excitement. The expression tic douloureux is sometimes used in place of facial neuralgia; but this is not an accurate use of the term, as tic is a spasm, and in pure facial neuralgia there is no spasm of the muscles.

In this case there is a forward motion of the head at the time of the spasm. There is, indeed, involvement of the sternocleido-mastoid muscle of the left side, and also of the trapezius muscle. In some of the more severe spells this spasm of the trapezius is quite distinct. The involvement of these muscles means implication of the spinal accessory nerve, the motor discharge passing over from the facial to the spinal accessory whenever the attack is very violent. I think that the tic also affects the tongue, but as yet I am not positive about that.

Looking at the eyes during a spasm, we do not find any reason for thinking that the motor oculi is involved. The apparent movements of the eye during the attack are entirely due to the orbicularis palpebrarum muscle, which is supplied by the facial nerve. The pupils are normal,

and the movements of the eye are not restricted.

Now, during the present attack, which is more severe than any which we have witnessed here to-day, we find one side of the tongue in a condition of hard, tonic contraction, showing involvement of the hypoglossal nerve. We have, then, involvement of three nerves,—the facial, spinal accessory, and hypoglossal.

Last night our patient was in a condition of very profound asphyxia from spasm of the glottis, due to implication of the so-called recurrent-laryngeal branches of the spinal accessory, which come out of the sheath of the pneumogastric nerve. Death was seemingly averted only by the inhalation of nitrite of amyl.

He has some pain in the tongue, but altogether it is almost a painless spasm. There is no involvement, fortunately, of the trigeminal nerve, or else life would be a burden to him. There is no movement of the jaw or striking of the teeth, as would be the case if the temporal and masseter muscles were affected.

Our patient stated that he had fourteen epileptic fits in 1871, the next year seven, followed by five, three, two, and one in each of the succeeding years. Last year he had none. There has been no impairment or change in the mental faculties.

I think that, with this history, we can come to the conclusion that the disease is not peripheral. Tic is sometimes peripheral from reflex irritation, but the involvement of these different nerves points rather to a centric disease. He has no soreness of the teeth, nor any discoverable source of irritation in the region of the trigeminal nerve. Moreover, a peripheral tic is usually painful, owing to the implication of the trigeminal nerve. I have known of one case where abscess of the frontal sinus was the cause of tic, which was relieved by perforating the bone. We must therefore always look for peripheral irritation; but we find none here. From this failure, from the painlessness and wide-spread character of the convulsions, and from the history of epileptiform fits, I believe that this man has a centric disease. He is forty years old, and has a distinct specific history.

The history of the first occurrence of the epileptic fit is obscure: there are no positive data of specific cerebral disease,

but a lesion of the lower portion of the ascending frontal convolution of the right side will account for all the symptoms, which otherwise would be of a very obscure character. Specific lesions involving primarily the meninges, secondarily the brain-substance, are not rare in this position, and the disease here is probably of such nature.

The first thing to do is to make the therapeutic test; and he has been taking thirty grains of iodide of potassium three times a day without any evidence of iodism; but it has as yet failed to have much influence on the fits: he has, however, been on this treatment for but three or four days.

In my experience, a man who resists the physiological action of ninety grains daily of the iodide is very rarely affected unpleasantly by one hundred and eighty grains; and I shall accordingly increase the diurnal dose to that amount.

In regard to the spasms themselves, we could use coniine, but in order to control them it would be necessary to employ the drug in dangerous doses. The only fatal case of recent coniine-poisoning which I can at present recall was when it was used to relax facial spasm. When there is danger of approaching asphyxia from closure of the glottis, as was last night the case with this man, you must use nitrite of amyl, which is more rapid in its action and less dangerous, in my opinion, than chloroform. If the nitrite fail, open the larynx at once.

[Under the treatment indicated, the spasms become less severe, a sensible effect being produced in one week, and in three weeks the seizures had become very infrequent and very light. At the present time, January 30, 1884, there has been no spasm for six weeks; the patient is entirely free from headache and is apparently well.]

TRANSLATIONS.

RECOVERY AFTER THE PASSAGE OF A RAMROD THROUGH THE BRAIN.—Dr. G. Fischer (*Deutsche Zeitschrift f. Chirurgie*, xviii. p. 411) reports the following case, which is even more remarkable than the celebrated crow-bar case. Through the accidental discharge of a carbine while being unloaded by a young man 17 years

of age, the ramrod was driven into the back at the right side of the fourth dorsal vertebra, passed along the chest-cavity, up through the right side of the neck, entered the base of the skull, passed through the brain and vault of the cranium, and extended 30 cm. above the top of the head on the left side. The author states that the ramrod passed through the sphenomaxillary fossa, then through the right half of the sphenoidal bone, from which point a fissure extended backwards into the right optic canal, with injury of the optic nerve, and forward into the right half of the cribriform plate of the ethmoid bone; consequently, as the missile emerged from the left side of the head the left frontal lobe of the brain must have been injured. The length of the wound, from the fourth dorsal vertebra to the left frontal bone, was thirty-five centimetres; the length of the ramrod was fifty centimetres.

The first symptoms after the injury were those of concussion of the brain, while after removing the ramrod, four hours after the injury (to accomplish which, blows with a hammer were necessary), through an incision in the neck, symptoms of compression appeared, probably due to hemorrhage within the cranium. There was also transient loss of memory, and from the fourth to the twelfth day escape of cerebrospinal fluid through the left side of the nose, and on the seventeenth day discharge of pus from the right ear. Six weeks after the injury, atrophy of the right optic nerve could be detected; other symptoms were then absent.

The wound in the head was healed on the thirty-fourth day, the wound in the neck on the fifty-ninth, and the wound in the back on the sixty-sixth day. Eleven months later, with the exception of atrophy of the optic nerve, the general condition was normal. The author, however, does not regard the subsequent development of an abscess in the brain, with mental disturbance, as improbable.

Dr. Fischer has been able to find only four cases reported of injury to the brain with ramrods, and in all of them the missile entered the top of the head. Of these cases, two, those of Morand and Limbourg, occurred in the last century, one, that of Larrey, in the commencement of the present century, and the other, that of Chassaignac, in 1842.

In a fifth case, that of Hennen, a ram-

rod entered the brain by the patient falling on it, and caused instant death. In the case of Larrey, death occurred on the second day, from inability to remove the ramrod entire; in the case of Chassaignac the result is unknown; while the two other cases are reported as healed.—*Centrab. f. d. Med. Wissen.*, January 26, 1884. s.

APPLICATION OF STRYCHNIA TO ALCOHOLISM.—Although Giacomini pointed out a long time ago the physiological antagonism existing between alcohol and a number of poisons, and Magnus Huss applied strychnia to the treatment of certain phenomena of alcoholism, it is to Luton, of Rheims, that we owe the precise formula for the administration of this alkaloid to the different forms of alcoholic poisoning. In delirium tremens, particularly, was it found that doses which under other circumstances would be dangerously large were administered not only without bad symptoms, but with decided benefit.

Dujardin-Beaumetz (*Bull. Gén. de Thérapeutique*) declares as the result of his observation that strychnia should not be considered as the remedy for alcoholism *per se*, but as the best agent with which to combat the nervous manifestations of alcoholism,—the intoxication and delirium tremens. Since it prevents drunkenness to a large extent, it enables the individual to drink more without becoming intoxicated; but it does not prevent the ordinary degenerative changes in the viscera that are well known as being produced by alcohol. In therapeutics, strychnia, therefore, would not be valued as a remedy for alcoholism, but only as an agent to control the nervous manifestations.

SUBCUTANEOUS INJECTIONS OF CHLORAL IN STRYCHNIA-POISONING.—Faucon and Debierre, in a case of grave poisoning by strychnia, gave, in the course of fifty-nine hours, one hundred and twenty subcutaneous injections of chloral hydrate (aggregating fifty-eight grammes), saving the patient's life.—*Journal des Sciences Méd. de Lille*; from *Revue de Thérapeutique*.

POLYPI IN THE EAR TREATED WITH ALCOHOL.—Politzer is said to obtain good results in polypi of the ear by the instillation of a few drops of warm alcohol several times a day into the external meatus. The treatment extends from a fortnight to two months. The polypi gradually shrink and disappear.—*Wiener Med. Blätter*.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 8, 1884.

EDITORIAL.

THE USE AND ABUSE OF VIVISECTION.

IN an editorial which appeared in these columns in the issue of March 10, 1883, upon the subject of Anti-Vivisection Agitation, an opinion was expressed that vivisection, when conducted in a proper manner, is recognized by medical science as a legitimate and necessary means of advancing research and of adding to our store of knowledge. It was further stated that it was believed that the members of the medical profession are "very generally opposed to unrestricted vivisection, and in favor of its regulation by law;" and the hope was expressed that a committee of the College of Physicians would meet those interested in this movement, in order to frame a bill that should be mutually satisfactory. In a second editorial upon this subject, which appeared in the issue of February 9, 1884, these temperate and perfectly sound views were again published, in connection with the announcement of the annual meeting of an association which had been incorporated for the express purpose of "restricting the practice of vivisection within proper limits."

In an editorial comment upon this same meeting,* one of our valued contemporaries confirms our views as to the attitude of the profession towards vivisection, by the use of the following language:

"We fully agree with those who would restrict its use within certain limits,—limits that would insure the saving of ten thousand pains to humanity for every single pain inflicted on a lower animal,—

as, for instance, requiring a certain authority as a license to practise vivisection, procurable (without expense) only by those who can furnish satisfactory evidence that their physiological studies have progressed sufficiently far to make it reasonably sure that the results of their experiments on animals will redound to the good of mankind."

We are gratified to find that the editor of the *Medical and Surgical Reporter* not only entertains such views, but also has the boldness to express them. This is, certainly, the only logical ground; for all the arguments in favor of the use of anything could never warrant its abuse; and both the profession and the public certainly have a right to request that vivisection shall not be abused.

The *Medical News* has also an editorial with reference to our remarks already quoted, in which exception is taken to the sentiments above expressed; and the animus of the Anti-Vivisection Association is severely criticised.

Without assuming the right to speak for the Association in question, we may at least remark that, when it is desired to learn the objects of any incorporated association, a copy of the charter will give the necessary information, without resorting to private interviews with active and enthusiastic advocates: if the association exceed its corporate privileges, the remedy can easily be applied. We may also observe that it is always to be regretted, when one party to a controversy imputes unworthy motives and methods to those who happen to differ with it in opinion. Abuse and ridicule do not convince, nor can they supply the place of argument. It is true that Magendie's experiments were cited as illustrating an abuse of vivisection, since it was declared by Flourens that Magendie sacrificed eight thousand dogs in one series of experiments only to arrive at last at an incorrect conclusion; true, also, that these were

* The Medical and Surgical Reporter of February 16.

performed before the use of anæsthetics; but the critic neglects to state that these experiments were upon the nervous system, and were such as required consciousness upon the part of the animal experimented upon, and therefore would not be such as anæsthetics would be used in to-day; and, further, that these particular experiments were quoted not because they were painful, but because they were useless.

If it be true that the *Medical News* "years ago offered to accept such a bill as has since been passed in Great Britain," we are happy to learn of it. We believe that any community that is sufficiently enlightened to legislate for the prevention of cruelty to animals should in common consistency also prescribe the conditions under which vivisection might be permitted.

In conclusion, we will state that, as we have been authoritatively informed, the present movement does not seek to abolish or to interfere with scientific experimentation further than to urge that it be done in as humane a manner as possible. No one believes it feasible to prohibit vivisection any more than it would be possible (the comparison is borrowed from the *Medical and Surgical Reporter*) to abolish whiskey-drinking by legal enactment; but every rational person believes that vivisection, if it is to be made available at all for scientific purposes, must be conducted according to strict scientific methods. Many, who have had opportunities of investigating the subject, have declared that vivisection is overdone and is greatly abused in this country, though still to a far less extent than in Europe. For the protection of scientific vivisection, therefore, it would seem wise and proper for its defenders to declare by what methods its ends can best be secured, and to seek by appropriate legislation to prevent its abuse. Such defenders could meet in an amicable spirit their fellow-citizens who desire the restriction of vivisection within proper limits, it seems to us,

without any sacrifice of dignity, and possibly with distinct gain to medical science. At the least, we feel certain that it would be so as far as concerns its standing in the estimation of the community.

THE MEDICAL COLLEGE OF VIRGINIA.

THE Medical College of Virginia, which was organized in 1838 as the medical department of Hampden-Sidney College, obtained its present name under a new charter in 1854, but classes have been graduated each year since 1840. The school, located at Richmond, has eight professors and ten adjunct professors, and appears to be doing good work.

There is a danger that its future usefulness may be permanently crippled by the passage of a mischievous piece of legislation, known as Senate Bill No. 243, now in the hands of a committee for consideration. This bill is nominally for the purpose of providing an annuity for the college, and providing for State students therein; but in fact it empowers the members of the General Assembly to nominate as many free students as there are members of the Assembly, in return for an annual appropriation of seven thousand five hundred dollars. As there is no restriction with regard to sex, color, or nationality in this bill, the friends of the school have good reason to fear that its ultimate effect will be to lower the standing of the college among medical educational institutions in this country. There appears to be an impression abroad that medical education is such a good thing that it is impossible to have too much of it; and as to the doctors, "the more the merrier."

THE final chapter of Dr. Formad's article on the "Bacillus Tuberculosis and the Contagion of Phthisis," on account of its length, has been crowded out of this issue, but will appear in our next.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE position of a correspondent is at times unsatisfactory: it may be well if only at times. But really there is just at present so little of general interest going on in the Societies or elsewhere that it is difficult to find material interesting to the reader. To be sure, a correspondent may mount one of his hobby-horses and ride far afield to his own intense satisfaction; but how far such a gambol would be deemed satisfactory to the subscribers to the excellent journal, *The Philadelphia Medical Times*, it is not desirable to speculate.

The germ-theory in some form always retains a hold upon the public mind, and the bacilli of tubercle are apparently still in vogue. A colleague of the writer's is a personal friend of Koch's, and has expounded his views on this side of the North Sea with much ability. Possibly his position on the subject is not entirely devoid of interest to some on your side of the Atlantic. He is an able physician,—there is no question about that,—and what he does and what he has got to say has a value, I will go bail for him for that. Without having made special inquiries, but taking what is going, it seems that, in the presence of tubercle, bacilli are never wanting. Whenever there is any activity going on in tuberculous growth, the characteristic bacilli are found in abundance. Extensive search has established that fact. And to one working with the microscope and familiar with the art of staining and mounting specimens, a microscopic examination of the sputum may be a ready means of determining the condition of the lung in a case where consolidation of the apex is unquestionably present. But are there not other, older, less troublesome (to the bulk of practitioners), and equally trustworthy measures of gaining the same information? Have the features of hectic fever become transformed, or has the nocturnal rise of temperature, with its up-and-down tracing, lost its significance? Does the moist râle speak with less decisive tones than it did when Laennec laid down its value? "In the latter cases [softened tubercles], the rattle has a peculiar character which I shall denominate *cavernous*; it is more than usually abundant and large, and is confined to a small space, within which we commonly observe at the same time both the cavernous respiration and pectoriloquism." Now, my colleague knows all this as well as anybody, and infinitely better than most men; but he has most faith in the diagnostic value of the bacilli. Recently a case of senile phthisis came into my wards where a large cavity existed at the upper third of the left lung. From this, at times, after severe coughing, a most

offensive sputum is expectorated, quite different from his ordinary phlegm, which is inodorous. Of course, this tells of a cavity with comparatively hard, incompressible walls, where a certain amount of pressure is required to compress this firm wall and get up some of the contents of the cavity. The case could be termed one of fetid bronchitis; and a great source of trouble the poor old man with his odorous sputum is to the other patients in the ward, despite a carbolic respirator and deodorants internally. The cavity is quite too large for the hypothesis of bronchiectasis; and yet the patient, who is of a high order of intelligence, is positive about the fact of his never having been ill or troubled with a cough. It seems incredible that so large a portion of the lung could have disappeared without some derangement of the health which would have left an impression upon the patient's memory. My colleague's physical examination is superb, so he was requested to examine the patient by himself and for himself. Going into the ward just as this was completed, the answer made to the inquiry of what he thought was, "Excavation, certainly." "In the absence of any history of illness?" "Certainly. But, if you want to be sure about it, examine the expectoration for bacilli. That will settle the matter." The microscopic examination has not been made, nor is it at all certain that it will be made; but the incident tells much as to the present state of opinion upon the subject of tubercle-bacilli in a man who has thoroughly studied it and who carries a level head. The rational outcome of this faith is naturally inhalations. If the bacilli are the cause of the tubercle, then this treatment ought to be fatal to the little homicides, and the patients ought swiftly to leave all their evidences of phthisis behind them. It may be premature to anticipate the results of this experiment; but how is it that certain families manifest such decided tubercular tendencies, while others are equally exempt from them? I suppose the answer is, these bacilli are constantly being respired and find a habitat in one person's lungs and no home in another's. But, granting this, how do these minute organisms excite a cell-growth of defective vitality which experience has told us in pretty unmistakable accents is distinctly linked with an inability to assimilate fat? If the sufferer can be induced to take fat in such form as permits of its being taken up by the lacteals in the villi of the intestine, then the lesions in the lung heal up and the patient gets well. How about the bacilli then? Has the fat had the same effect upon them as the late lamented John Hughes Bennett used to assert that fat had upon the acarus scabiei, and that the addition of sulphur was quite a superfluity? That softening tubercle forms a nidus in which these bacterial rods readily live and breed seems to be a fact. But what is the relation of this par-

ticular fact to the other clinical facts of phthisis, is just what we all want to know. However, my colleague accepts the presence and the number of bacilli found in the sputum as the most trustworthy evidence of the presence of that neoplasm which Laennec called tubercle, and which he regarded as the essence of phthisis,—a view which long held its ground unshaken, but about which modern pathologists are by no means agreed. How far the tubercle-bacillus will hold its ground remains also to be seen. If it be finally decided that it only finds a suitable home to its liking in softening tubercle, then it may retain some diagnostic value; but the circumstances under which tubercular growth is favored, and the opposite conditions which are inimical to it, will still preserve the value at present attached to them. And perhaps, in critical cases, the condition of the tongue, as indicative of the state of the alimentary canal, is the most important and significant indication of all the phenomena associated with pulmonary phthisis.

The good, hard and fast rules of the examination-table are being found less and less infallible as the practitioner travels on his medical path in actual practice. When sugar was found in the urine of a patient wasting away, the hypothesis was erected that the presence of sugar in the urine was significant that the person would soon belong to the past. And it cannot be denied that the teaching of the schools is to the effect that glycosuria means diabetes, and diabetes is a malady which in no long time ends in death. Aretæus gives a clear description of the malady, and thought that the disease was "a colliquation of the flesh and limbs into urine." It was not till the time of Willis that the presence of sugar in the urine was fully recognized. Later authorities have decided that diabetes is "a disease in which a saccharine state of the urine is the characteristic symptom." Diabetes, then, is not a wasting disease in which the body is gradually starved to death by the sugar escaping by the kidneys; but the presence of sugar in the urine tells of the oncome of a wasting disease. If the last is seriously meant, then very often glycosuria lies like Ananias and Sapphira.

The other day, meeting an eminent physician and falling into chat with him while inspecting Barnum's "Toung Taloung," the so-called "white" elephant, the conversation ran on the pitfalls of practice arising for some of our cherished theories. During this turn of talk the question was put, "How do you determine in a case of glycosuria whether the patient has diabetes or not?" He looked at me with a steady, inquiring gaze, and slowly replied, "I look at him." Now, it struck me this was just about the best and the most sensible remark upon the subject that could well be made. Diabetes is a disease which prints its mark on the organism

in such a way that, when its symptoms are detailed and the urine is examined and found to contain sugar, the conclusion is not far to seek. At chest-hospitals it is almost a rule to strip all the patients and examine the chest as a first preliminary, without premising one or two leading questions to the patient,—in other words, assuming that because a patient comes to a chest-hospital, therefore there is present some mischief in the chest. So, when there are "Renal Hospitals," a day not so distant as to be over the horizon, it will probably become a rule to make an examination of the urine as the first step. And when this is done, how many patients will be found to have saccharine urine? A good many more than are actually diabetic. When some apex-consolidation is found, how do we decide upon whether it is old or new? We look at the patient and ask a few questions,—at least that is my way of approaching the difficulty,—after the stethoscope has had its word (which is often an inarticulate sound); and, depend upon it, in maladies affecting the whole system, as phthisis and diabetes undoubtedly do, it is a good and sound plan "to look at the patient." The trained eye is our main guide as to the general condition of the patient and his health or ill health. When a corpulent, florid-complexioned man, well fed and vigorous, passes sugar in his urine, only a tyro could conjecture that he was the victim of the classical diabetes,—a formidable wasting disease. Between the matter of examining the sputum for bacilli in a case of lung-consolidation, to determine the precise histological condition of the neoplasm, and looking hard at a man who has perceptible quantities of sugar in his urine, lies a mighty tract of knowledge. But still it is only what a medical man must command if he has either to win the confidence of his patient or hold his own in the present battle for existence. When a patient looks haggard or worn, complains of muscular lassitude, feels his work growing too much for him, and is troubled with thirst (and sugar-thirst is infinitely less quenchable than salt-thirst), then the presence of sugar in the urine becomes of the highest significance; and, though this perhaps will be regarded as rank heresy, relaxation from labor, a diminution of the tax upon the nervous system, is more important than the shallow line of avoiding everything that can be converted in the body into grape-sugar. It may be well to give the liver physiological rest as to its glycogenic function, until it has come round; but that is not the whole of the pathology of diabetes; while the proposal of a French professor to treat diabetes by feeding the patient on the flesh of carnivorous animals was about the height of shallowness and folly.

Some time ago, a good deal was said in our medical journals about the state of medical teaching at the University of Oxford. The

enthusiasm of the late Professor Rolleston had been chilled down to zero, and the physiologist had been transformed into the archæologist, who found his highest object of interest a tumulus or an old British barrow; while physiological teaching died out practically, if not in actual fact. The medical teaching had gone the same road, and, while under Prof. Michael Foster Cambridge was pushing on in medical teaching, at Oxford it had become but the shadow rather than the substance. To remedy this state of affairs, Prof. Burdon Sanderson was induced to apply for the post of Waynflete Professor of Physiology, and was elected. He is a man of great perseverance, and one who would probably be as unconscious of being beaten if defeated as any of the Britishers of whom Napoleon complained that "when they were beaten they would not run." Since then a turn in the tide has taken place, and the proposition was soon mooted to erect the buildings requisite for proper modern physiological teaching. The decision came off on the 5th, and the opposition had taken their stand upon an anti-vivisection platform. It was proposed that a sum of £10,000 be devoted to the aforesaid object, and on this question the battle was to be fought. The opposition issued circulars to all those who were supposed to be disinclined to experimental research in Oxford, but astutely avoided those who were in favor thereof. The professor himself was not aware of what was on foot, so well was the secrecy of the movement kept, until three days before the time of decision. He at once took a vigorous step and wrote a letter to the *Times*, followed up by an urgent appeal to Oxford graduates in London. There was consequently a large assemblage on both sides. The subject was formally introduced, and Freeman, the historian, an ill-tempered, quarrelsome little body, followed. He denounced the whole subject in no slight terms, concluding "with a peroration condemning the use of the new schools for the fooleries of a ball-room, or the museum for the horrors of a torture-chamber." There was no uncertain sound about this assertion. Then Prof. Acland, a stately, imposing man, the head of medicine at Oxford, spoke, stating that the circular was misleading. It was headed "Vivisection at Oxford," and seemed to take for granted that physiological teaching meant nothing more than the infliction of pain upon animals, as Mr. Freeman assumed. What the historian had described as having been done to a live dog had really been performed on a dead frog,—a very different matter. A storm of cheers and hisses arose, and proof was demanded,—and furnished, whereupon new cheers rang out. Instead of the learned professor spending his time mainly in the infliction of pain in cruel experiments for the "pleasure and amusement" of his students, he did not even possess a license to perform

experiments; and he certainly is not likely to perform them without such protection. The Professor of Medicine concluded, "I will use no hard words. Would that the anonymous committee, before it had spread these misleading statements you have read, had learned their lesson better, and taken a larger view of the world of our duty and of true humanity!"—a hope which, however fervently expressed, is scarcely likely to be realized with the present constitution of the anti-vivisectionist array. Then arose one of the anti-vivisectionists, who failed to make himself heard, though a man of no small proportions. After that another tried his hand, one of the best men in the anti-vivisection ranks, but he utterly failed to produce the desired effect upon his audience, neither justifying his position nor influencing his hearers, if the vote may be taken as the test of his success.

Then, having done their best, such as it was, the counting came on, and it was found that the "placets" numbered one hundred and eighty-eight, while the opponents were only one hundred and forty-nine, all told. It was a substantial victory, despite the measures taken to defeat the motion, taken in guile, in secrecy, and with false assertions. A prolonged burst of cheering broke out from the winning side. Then followed three cheers for Dr. Burdon Sanderson, who had led his following so skilfully. The proceedings then terminated, and the building of the requisite laboratory will at once be set about. This gives a prospect of Oxford being no longer "a lost school of medicine," which is not only a matter for direct congratulation, but the other undergraduates will see medicine in its proper position instead of its neglect as in times past, and carry away with them some just conception of what a modern medical education involves. That the theological element at Oxford will succeed in emasculating the Waynflete professor, as they certainly did the late Linacre professor, is improbable. And yet Rolleston was no weakling. He was a robust, energetic Yorkshireman. He did not look a favorable specimen of the man whose earnestness could be eaten out of him; yet the effect upon him was that of a corroding acid upon metal. The theological party (even when backed up by the anti-vivisectionist array) will have to find out some new solvent for the purpose of eating out the earnestness of the new professor, and some more skilful line of attack before they can succeed in ejecting medical teaching from the University of Oxford.

J. MILNER FOTHERGILL.

THE NEW YORK ASSEMBLY has passed a bill limiting the time of service of conductors and drivers on city railways to twelve hours a day. In Philadelphia these men work from sixteen to eighteen hours a day.

CINCINNATI.

PHYSICIANS AND DRUGGISTS.

IN your issue of February 9 you publish the rules as prepared by a committee from the Academy of Medicine, the Cincinnati Medical Society, and the College of Pharmacy. Strange to say, these rules were not adopted by the Academy because of their stringency in reference to pharmacists' prescribing, and because many of the physicians desired to prescribe proprietary articles. The discussion grew rather warm, and developed some peculiar facts. It was disclosed that many of the physicians keep their own stock of drugs, which they dispense to their patients. Many reasons were given for this. Some said that their prescriptions were frequently tampered with by the pharmacist, that substitutions were made, that old, inert drugs were used, that remarks were made by the dispenser to the patient deleterious to the prescriber. Others keep a stock of drugs on the score of economy, claiming that the profit accruing to the pharmacist is enormous. Then it was said that when a physician dispensed his own medicines, the patient could not get the prescription refilled without the consent of the prescribing physician.

The majority of the members, however, did not think that the advantages arising from keeping their own drugs would at all compensate for the disadvantages, and they thought that a skilful pharmacist was a necessity to the profession.

The rules passed the College of Pharmacy without any change, but, owing to their failure in the Academy, they are of no value.

A Children's Hospital has been endowed by a wealthy lady of the city, who has placed it in charge of Dr. Forcheimer, a gentleman of well-known ability. He has chosen as his assistants Drs. W. W. Seely, E. W. Walker, Walter Christopher, and Robert Stewart. They have secured a commodious building, with a large yard, located in the German quarter of the city. They have trained nurses in attendance, and every modern convenience for the comfort and welfare of the little sufferers. The wards are small, but well lighted and fairly well ventilated. The present capacity of the hospital is twenty-five beds, and these are full nearly all the time. The hospital is free to the poor, and no contagious diseases are admitted. Heretofore children have all been sent to the City Hospital or to the Home of the Friendless. In the latter place the attention and accommodations are quite inadequate to the proper care of the sick. A well-fitted post-mortem room is under the charge of the pathologist, Dr. Walker, and will no doubt throw much light on otherwise obscure cases. The generous patron of this children's hospital is Mrs. Maria Longworth Nichols, a sister of the late Dr. Langdon Longworth.

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A bill has been recently introduced into our State Legislature entitled "An Act to establish Boards of Health and a Medical Board of Examiners and Licensers, and regulating the Practice of Medicine and Surgery in the State of Ohio, and defining the Duties of such Boards." The bill provides for the appointment by the Governor of a Board of Health, consisting of nine physicians, "who shall be graduates of reputable medical colleges, and who have practised medicine or surgery for not less than ten years, but none of whom shall be in any manner connected with any medical school or college; provided, that in the appointment the several systems of medical practice recognized by the three State medical societies shall be in proportion of six, two, and one: that is to say, the system having the largest number of legal practitioners to have six, the next largest to have two, and the remaining system to have one." Thus a half-loaf is given to the so-called regulars, a bite to the homœopaths, and a crumb to the eclectics. The bill provides for the organization of subordinate county Boards of Health, for the prevention of epidemic and endemic diseases, and for the regulation of the practice of medicine. The members of the State Board shall constitute the Board of Medical Examiners and Licensers.

They shall meet in April and October of each year, to examine all applicants for license to practise medicine or surgery. The questions forming such examination shall be the same for each class of candidates offering themselves, with the exception of the principles and practice of medicine and therapeutics, in which branches the questions for each candidate shall be prepared by the representative in the Board of Examiners of the system of practice to which such candidates wish to be licensed.

Each candidate must be a graduate of some reputable medical college.

This bill was sent to the Cincinnati Academy of Medicine for endorsement. The discussion which it elicited proved conclusively that the bill will meet with the opposition of the college men. They find fault with any number of minor points in the bill, and wisely do not base their objections on the feature really obnoxious to them,—viz., the re-examination of their graduates by gentlemen not connected with any college. It is safe to predict that the bill as it reads will not receive the Academy's endorsement.

The firm of Williams, Ayers & Sattler, oculists, have been sued for twenty thousand dollars' damages by a former patient. The patient claims that he has become blind from sympathetic ophthalmia, because of the physicians' failure to treat him properly when he first applied to them with a foreign body in the eye. No doubt the firm will be put to some annoyance and expense, although there is no danger that their high standing as

gentlemen and physicians will be at all injured.

The annual flood of the Ohio reached the unprecedented height of seventy-one feet and three-fourths inch, or nearly five feet higher than that of last year. The extra care which will now be taken to prevent sickness will probably counterbalance the bad effects of the dampness and alluvial deposit in the submerged district.

A. B. T.

February 19, 1884.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 21, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

THE DIFFERENCES IN FORM OF THE ADULT HEAD.

Dr. JOHN C. DALTON made some remarks upon this subject. Recently he became interested in a method of comparing the differences in form of the adult human head by means of the paper patterns of hatters. These patterns were made from models of the circumferential outline of the head on a line with the hat-band. At one of the shops where he visited there were large quantities of these patterns, and it occurred to him in looking them over that there was a great variety in the forms presented. He had three hundred and sixty of these patterns, taken from customers as they appeared in succession. Nine diagrams, representing some of the most striking variations in outline, were shown. Looking at the diagrams in a general way, there were certain variations which would strike the observer. First of all, as to general shape, there were long heads and round heads. There was a great deal of variation within certain limits in this respect. It was considered that in the medium form of head, the width stood with relation to the length in about the proportion of 100 to 125. Practically, however, the mean length ranged between 120 and 130, and, representing the width by 100, any head in which the length would be represented by a figure below 120 would be classed as a round head, and above 130 as a long head. Besides these peculiarities respecting width and length, there were also other peculiarities in form. In some cases the front portion of the head was narrower than the back portion, and *vice versa*. In some the entire outline was curvilinear, but in the great majority of cases there were angles and straight lines. Again, the two sides of the head were more or less unsymmetrical. In diagram No. 1 there would be seen a very regular, symmetrical oval. In No. 2 there was a squaring of the anterior part of the head, and the temples were flattened. This flattening of the temples existed

in many cases. In No. 3 the occiput was less rounded. In one case the length was represented by 135, and in the longest of the lot the length was represented by 153. A general glance at the long head would give one the impression that the elongation consisted chiefly in the projection of the occiput. In the most nearly round diagram the length was represented by 108.

The want of regularity in the outline in the diagrams was present in all in greater or less degree, although it might not be apparent to the casual observer. It became very readily apparent, however, when the diagram was folded in the middle longitudinally. The edge of one half of the paper diagram would be seen to project irregularly beyond the corresponding part of its fellow. In some instances the want of symmetry was very pronounced, while in others it was very slight. Dr. Dalton had not been able to find any pattern in which there was perfect symmetry. This want of symmetry was also one of the first peculiarities which had attracted his attention in making successive sections of healthy brains, and was present in whatever direction the sections might be made.

These observations raised a question of some practical interest. We were now very strongly inclined to believe that all parts of the brain had not one and the same function or mode of action; that there were certain nervous operations conducted by the gray matter in one part of the brain, and other different nervous operations performed by the gray matter in other parts, so that we had begun to localize in many instances in a pretty distinct way certain particular functions in certain particular convolutions. It was also pretty well established that these differences in function and mode of operation were connected with differences in structure; that the gray matter in the anterior and posterior cerebral convolutions possessed regions of nerve-cells of different volume and different shape; that whole regions differed from other whole regions in this respect; and the same thing was true in the perceptive centres. Dr. Dalton then asked the question, Suppose one examine a brain of which the two sides were very different in form, did this not imply an exaggeration or a deficiency of certain parts of the brain that were endowed with special functions, and consequently differences in the operation of the nervous system? This might seem a natural conclusion, and yet he was not at all sure that it was well founded. If we took a long brain and a round brain and examined them, we should, in the first place, perhaps feel sure that the long brain had in it more gray matter in the cortical layer than had the round brain, because a sphere, of course, had a smaller extent of surface in proportion to its bulk than any other form of body. But it must be remembered that the brain did not present a

perfectly smooth outline, but was convoluted, and the round brain, therefore, might have more extensive folding of the convolutions, and consequently present as great an amount of cortical gray matter as did the long brain. Dr. DALTON showed some skulls, one illustrating the long head and another the round head, and stated that the round head was higher, fuller in the coronal region, whereby it might gain in superficial area. He inferred that this difference in superficial outline at a given portion of two different brains did not indicate a deficiency or an over-amount of special function; in the one case the corresponding convolutions might be shallow but wide, while in the other they were deep and narrow. There might be the same physiological quality in a particular part of the gray substance, although its position might be varied and even shifted. As bearing upon this point, Dr. DALTON presented two Indian skulls, in which the form had been changed by the custom of compressing the yielding skull of the pappoose, and compelling it while growing to assume a particular shape. It did not necessarily follow that in the one in which the forehead was greatly compressed there was none of that portion of the brain devoted to intellect, assuming that the intellect had its seat in the anterior convolutions; or that in the other, compressed in the occipital region, there was absence of the posterior lobes.

DISCUSSION.

The PRESIDENT said that about fifteen years ago there was a good deal of discussion among obstetricians with regard to the influence of parturition upon the shape of the human head. About that time he instituted some investigations at Bellevue Hospital regarding the shape of the head at birth. These investigations showed that the head of the infant, while being moulded to pass through the pelvic canal, became flattened at portions where there was greatest pressure, and filled out at portions where the resistance offered by the hard parts was least. For instance, if the occiput presented at the left ilio-pectineal eminence and the sinciput to the right sacro-iliac synchondrosis, the corresponding diameter of the child's head would after birth be found to be shorter than the opposite diameter. By this means he had been able to determine, when called in consultation within a few hours after a child's birth, what had been the presentation. There was another point which related to the change in the form and size of the adult head at different periods of life. Dr. Barker felt quite sure that the head did continue to change even until late in life. This was noticeable in his own case, as was shown by the hatter's patterns during the past twenty-five years.

Dr. J. L. CORNING thought Dr. Dalton had given a most accurate method for determin-

ing the form of the head. He had been interested in the suggestion that function depends rather upon whether the brain-structure is absolutely intact, than upon whether it presents a particular form. His remarks would show, for example, that pressure applied to the anterior portion of the head would result, not in obliteration or atrophy of the brain-structure below, but rather in pushing those parts in such a manner that they found room and place elsewhere. This question had its bearings upon another question to which considerable attention and importance had been given by some, namely, with regard to the influence of asymmetry of the skull upon the soundness of the mind. Dr. CORNING was not disposed to attribute much importance to this peculiarity in cranial outline.

Dr. DAVID WEBSTER said the statement made by the President that the head may change in form would account for the fact that his hatter had been compelled to alter his hat-pattern from time to time.

Dr. DALTON closed the discussion, and said the points brought out by the President were very interesting, and he was glad that attention had been called to them. He finished his remarks by saying that he thought we could not conclude certainly from asymmetry or a difference in external form of the adult head that there is a corresponding deficiency or enlargement of the brain underneath. It may exist, but it is uncertain.

AN IMPROVED METHOD IN THE TREATMENT OF CERTAIN FORMS OF SKIN AFFECTIONS.

Dr. ALBERT P. MORROW read a paper with this title. The method of treatment indicated consisted essentially in the application of medicinal substances to the skin in the form of fixed adhesive preparations. The object was to confine the application of the drug to the diseased surface alone, and to secure its continued action by long contact with the tissues by means of a practically immovable dressing. The means for carrying out this idea might be stated as follows: Applying the drug as a powder or paste, protected by a coating of collodion or other substance; by mixture with gelatin rendered soft and pliable by means of glycerin; by combining the drug in desired proportion with collodion or gutta-percha; by medicated gutta-percha mixture applied on cloth and cut into suitable forms. The author could not hope to offer anything new to specialists in this department, but an explanation of the procedure might not prove uninteresting to the general practitioner. Although their introduction dated back one or two years, they might be regarded as substantially new, since they were not described in recent text-books on skin diseases. He would endeavor to present the method in as concise a style as possible consistent with clearness, giving the main features of its application, the conditions in

which it was indicated, and the appreciation of its value based upon clinical results, derived partly from his own experience and largely from the experience of others. He thought its introduction marked a decided advance in cutaneous therapeutics.

The author first mentioned the appliances used hitherto for bringing medicines in contact with the cutaneous surface,—powders, lotions, pastes, plasters, resins, and ointments. But their use was attended with certain disadvantages. For example, powders were easily rubbed off, and when applied to exuding surfaces they frequently formed crusts and aggravated the trouble. Lotions evaporated, leaving the skin dry and brittle, causing uneasiness and distress. Pastes and plasters were of limited application, and, because of their uncleanliness, never had become popular. Resins acted as irritants. Ointments were generally regarded as the most convenient form, but they were easily rubbed off or became absorbed by the clothing; they were also uncleanly, and offended the taste of fastidious patients. Again, they had not the consistency to exclude air and thus effectually protect the surface; it was difficult also to restrict the oleaginous substance to the seat of the disease. He did not wish, however, to detract from the real value of these methods in some cases; indeed, they were often most valuable, and could not be substituted by any other method.

The range of adhesive plasters also was not universal; on the contrary, it was comparatively limited. In many cases of eruption, with a high grade of inflammation, and in other conditions, their application was impracticable.

Among the valuable drugs with which cutaneous therapy had become enriched were chrysarobin, salicylic acid, naphthol, chrysophanic acid, etc. The difficulty in applying some of these to the skin by former methods had led to the invention of the improved methods of which the author would speak. Chrysarobin possessed the objectionable property of staining the hair, skin, nails, and clothing, and of irritating the healthy skin and producing erythema and erysipelatous inflammation. This had led Dr. Fox to limit the drug by covering it, when mixed with a paste and applied to the skin, by a piece of gutta-percha tissue rendered adhesive by touching its edges with collodion; but this method of application was tedious. Dr. Morrow then referred to the preparations brought forward or used by different physicians for the treatment of skin affections,—Auspitz, Mitchell, Fox, etc. Drugs mixed with collodion had the advantages of convenience for use, of cleanliness, and of remaining for a time upon the skin. Gelatin mixed with water and allowed to dry could be kept for use. When applied to the surface it could be softened with hot water. It might be put up

in rolls, etc. Auspitz claimed advantages for a solution of refined gutta-percha in chloroform, it being quite durable, elastic, and dried more slowly than collodion, thus admitting of more thorough application, and presenting qualities which specially adapt it as an application to joints.

Gutta-percha plasters constituted a decided improvement upon lead and resin plasters. They were very convenient for application to the diseased skin of the palms, fingers, toes, interdigital spaces, near the anus, etc. They could be cut into strips admitting of accurate adjustment.

After briefly referring to the advantage with which certain authors had made use of collodion and gelatin adhesive plasters, medicated with chrysarobin, salicylic acid, carbolic acid, oxide of zinc, etc., in the treatment of psoriasis, chronic eczema, prurigo, and other forms of skin disease, Dr. Morrow gave his own experience, and stated that he had experimented with the preparations in a variety of cutaneous disorders, and for the most part with satisfactory results. He had been enabled to use chrysarobin in psoriasis affecting the face and hairy scalp without danger of injury to the eyes or other delicate parts. In chronic forms of eczematous disease, and even in acute forms, he had used gelatin medicated with ten per cent. of oxide of zinc with good results. A single application of gelatin medicated with ten per cent. of oxide of zinc and one per cent. of carbolic acid gave complete relief in an obstinate case of chronic eczema. Over the eyelids the gelatin coating could not be applied, for obvious reasons, and here a bismuth ointment was employed. After a few days one could see the exact line where the gelatin application terminated. Above this line the skin was harsh and presented its original characteristics, while below it was soft, and healthy in appearance.

Dr. Morrow summed up the advantages of adhesive applications in saying that they afforded complete protection to the part to which they were applied, and excluded the air; their fixation admitted of greater and more permanent action; by compression, they modified the circulatory changes and limited exudation; they were cleanly. They were of special benefit in cases of tendency to cutaneous hyperplasia from different morbid conditions, in overgrowth of the hard epidermis, in acne rosacea, chronic eczema, in tinea capitis, in syphilitic lesions, lupus, possibly epithelioma, etc.

Dr. E. B. BRONSON particularly admired the conservative manner with which the author had alluded to these new remedies. They had, it was true, become the fashion; the chances were that they would be overdone. They were suitable to certain forms of disease, and presented certain advantages over other forms of therapeutics. They were

not, however, of universal application. He had experimented with most of the applications referred to, and had arrived at the conclusion that the gelatin preparations possessed comparatively little value. The collodion and gutta-percha preparations were much easier of application, and it seemed to him that they would in time entirely supersede those of gelatin. He had used them to a considerable extent, more particularly the gutta-percha preparations, and could fully endorse all that had been said in their favor by Dr. Morrow. The diseases in which he had found them useful were those in which there was a certain degree of thickening. He did not think that their chief advantage was in their power to protect the parts, for the reason that, where it was desirable to do this, the remedies were not suitable, as they could not be applied sufficiently often. For instance, in eczema, it would be necessary to change the application at very frequent intervals, and under those circumstances, although protection was of the first importance, a protective dressing which was fixed, and could not be readily reapplied, was rather objectionable. It was rather for exact coaptation to the parts that these remedies were of especial excellence. Another advantage, especially in psoriasis, was the deliberate manner with which they could be applied. Gelatin preparations set too rapidly. In using chrysarobin in psoriasis, it was specially necessary to rub it thoroughly in. With the gutta-percha solution of Auspitz this could be done. Its chief advantage, however, was in that form of eczema in which there was considerable circumscribed thickening, and perhaps some itching. If it were desired to simply stop itching, the surface might be painted over with carbolic acid, and over this put a coat of gutta-percha protective.

Dr. JACKSON had made use of these methods, and had found trouble in applying the gelatin preparations; and, besides, in the few cases in which he had used it it caused more disturbance than the other methods. With regard to the collodion preparations, he agreed with Dr. Bronson as to their value in psoriasis and chronic eczema.

Dr. SHERWELL, of Brooklyn, had not had much experience with these methods. He had made use of preparations of collodion with salicylic acid and chrysarobin, with more or less satisfaction. He could conceive how the gelatin preparations, as Dr. Bronson had said, might be inconvenient to use, and he thought that there would be many difficulties in the way of applying these preparations to parts covered by hair. He could not see how they could be applied and kept on, and renewed, and when applied made as effective as unguents.

Dr. MORROW said the criticism which Dr. Bronson had passed upon the gelatin prepa-

arations might be perfectly reasonable from his stand-point, but he had not found any inconvenience in their use,—that was, no more than the time requisite for heating them and for their application. He thought that the efficacy of the gelatin preparations depended largely upon the exact proportions in which the gelatin, the glycerin, and the active ingredients were combined. For example, the first preparations which were made for him were defective, and had he passed judgment upon the value of gelatin applications from his first experience, that judgment would have been very unfavorable. But repeated trials produced better results each time. Simply by adding a little water or a little glycerin, as he found to be necessary, the proper degree of consistency could be secured, and when applied in this way they certainly formed a perfectly uniform elastic coating, which remained perfect, without cracking, for several hours,—depending upon the location and the motion to which the part was subjected. As to Dr. Sherwell's objection to the application of gelatin to exuding surfaces, he had conceived the same objection theoretically, but practically there was not this objection. As to Dr. Sherwell's objection to their application to the hairy parts, he had the hair cut off, and then found no difficulty in making applications containing chrysarobin, etc. There were certain other theoretical objections to the use of these preparations which had arisen in his mind, but which did not hold true when he came to make use of them in practice.

Dr. W. M. CARPENTER then read some resolutions, which were adopted by the Academy, cordially endorsing the aims of the Society whose object was to furnish first aid to the injured.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 13, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

URETHRAL STRICTURES, COMPLICATED WITH DILATATION AND HYPERTROPHY OF THE BLADDER AND URETERS, AND HYDRO-NEPHROSIS.

Dr. F. FERGUSON presented the specimens, which had been removed from the body of a man who died at the Emigrants' Hospital. The patient had been treated for urethral stricture at Guy's Hospital, and later entered St. Bartholomew's, where an operation was advised, but was refused. On admission to the Emigrants' Hospital he was suffering intense pain, and the bladder was distended to some distance above the pubis. Any operative interference whatever was positively refused, and the patient died without relief. He had denied venereal disease or injury. At

the autopsy three strictures were found in the membranous portion of the urethra, two of which were imperforate. The urethral canal was largely distended back of the strictures, and the bladder and ureters were greatly distended and their walls hypertrophied. The kidneys were in a marked degree the seat of hydronephrosis.

CARCINOMA OF THE STOMACH AND ŒSOPHAGUS.

Dr. FERGUSON also presented specimens which had been removed from the body of a woman who had died in her 43d year, at the St. Luke's Hospital. The symptoms had been pains in the back and epigastrium, and pain after eating. Vomiting set in later. The patient had lost much flesh, and presented a cachectic appearance. Solid food could not be taken. There were attacks of hæmatemesis. Nourishment was administered per rectum. At the autopsy, which was made January 30, 1884, about one-third of the cardiac end of the stomach and the lower portion of the Œsophagus were found the seat of carcinomatous ulceration. There were no secondary deposits.

PUERPERAL FEVER.

Dr. CHARLES C. LEE presented the uterus of a woman who had died in the hospital nine days after delivery, of puerperal fever. Labor had been normal. There was a slight laceration of the perineum, which was united by a single suture. Vaginal injections were employed after delivery. No abnormal symptoms developed until the fourth day after delivery, when, in the morning, the temperature rose to 103°, and the patient appeared to be quite ill. The pulse was one hundred and twenty. In the afternoon the temperature rose to 104°. The pulse was one hundred and thirty. It was supposed the patient was suffering from milk-fever, until the lochia began to be offensive, and then intra-uterine injections of bichloride of mercury, one part to two thousand parts of water, were begun and continued until the day of the patient's death. They were first begun less than twenty-four hours after the rise in temperature indicated that the patient was ill. The douche had the effect for the first two days of keeping the temperature below 102°, but after that it seemed to have no effect whatever upon the symptoms. Fetid granular débris came away, but there were no signs of membranes. At the autopsy the abdomen was found distended by gas contained within the stomach and intestines. The peritoneum was cloudy and covered with a pellicle of fibrin and pus, and its cavity contained a small amount of sero-purulent fluid. The uterus was partly involuted, but was free, and its external surface showed no signs of inflammation. Its lining membrane was covered by a dirty-brownish granular material, heaped

up to an irregular depth, at places being an eighth of an inch thick. It contained no fibres, and evidently was composed of broken-down clot. It possessed an offensive odor. Dr. Lee remarked, concerning the case, that while it did not show but what intra-uterine injections were most important and necessary in the treatment of puerperal fever, it did show that this method should not be relied upon entirely, to the exclusion of all others, as practitioners of more limited experience might infer from discussions upon this subject before our medical societies during the past few months. In this case the douche was employed during the full course of the disease, commencing a few hours after the first development of symptoms, and was administered by an experienced house-physician, and yet the patient died. Dr. Lee also showed two glass tubes for making intra-uterine injections, and a hard-rubber tube employed in Vienna, and expressed it as his belief that the curve of the latter instrument was best suited for introduction into the uterus in the position which it assumed just after labor.

Dr. A. JACOBI thought the height to which the temperature had reached would indicate that the septic poisoning had gained too strong a hold before the injections were begun. In diphtheritic inflammation the temperature often remained comparatively low throughout the entire course of the disease. He agreed with Dr. Lee, however, that we must wait for symptoms to develop before beginning the intra-uterine injections, although his diagnosis at that time might come in too late to save the life of the patient. Regarding tubes, he had, notwithstanding all that had been said in favor of the glass tube, confined himself to the use of the large elastic-rubber tube, which he introduced into the uterine cavity, gradually withdrawing the wire as he did so, and thus was certain that the tube entered the cavity and did no harm.

IMPERFORATE ANUS.

Dr. W. P. NORTHRUP presented a specimen removed from a child which died in the Foundling Asylum, at the 8th day of age. It had been sent out to nurse, and was returned with the statement that it had vomited its food, was very restless, and had had no passage. Externally the anus appeared normal, but on introducing the finger inside the sphincter it came in contact with a thin membrane, and, penetrating a little farther, another membrane was ruptured, when gas and faecal matter escaped. There was much relief of symptoms afterwards, and it was thought the child would live, but, without very good cause, it died eight days from birth. At the autopsy the abnormality just mentioned was verified.

GENERAL INTERSTITIAL TISSUE HYPERPLASIA.

Dr. A. JACOBI presented a series of specimens removed from the body of a child which

died at about the 2d month of age, at Bellevue Hospital, where it had been brought with the sick mother. Death took place rather suddenly, and nothing specially abnormal had been observed in the child's condition. At the autopsy a lateral pharyngeal abscess was found on the left side, and in the neighborhood enlarged glands. A number of glands in the body, the bronchial, mediastinal, and mesenteric, were considerably enlarged. The left lung was the seat of hyperstasis, its apex emphysematous. The right lung was the seat of interstitial pneumonia. The liver presented numerous small dots, due to interstitial hyperplasia, and it contained a slight amount of fat. The spleen had apparently undergone the same change. The walls of the lower third of the small intestine were thickened; Peyer's patches were enlarged, some having undergone ulceration. The kidneys had likewise undergone interstitial tissue-hypertrophy. The brain was not apparently abnormal. There was no history, but it was probable that an explanation of the general interstitial hyperplasia would have to be sought in hereditary syphilis.

STRICTURE OF THE ŒSOPHAGUS.

Dr. BEVERLEY ROBINSON presented the specimen, which had been removed from the body of a man 42 years of age, who died in St. Luke's Hospital. He had suffered from a profuse muco-purulent expectoration, from considerable dyspnoea, from vomiting, and had lost flesh. During the three weeks the patient was in the hospital there was no vomiting, and it was only during the latter two weeks of his life that he complained of difficulty in swallowing,—a fact of some interest, as, at the post-mortem, the Œsophagus was found nearly completely obstructed some distance of its length by carcinomatous degeneration.

AN OSTEOTOME.

Dr. J. A. WYETH presented an osteotome, invented by Mr. Gowan, of Guy's Hospital, and also a modification of the instrument, made by himself. It consisted of a saw made in the shape of a chisel, which was moved through the segment of a circle while held firmly in a slot connected with a pair of spring-jaws intended to steady the bone while it was being divided. He looked upon the instrument as the most valuable in his armamentarium. It had given entire satisfaction, and with it he had performed excision at all the principal joints of the body.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

AT a meeting held February 14, 1884, Dr. JAMES TYSON, President of the Society, in the chair, the following specimens were presented:

Aneurism of the left ventricle. By Dr. W. E. HUGHES.

A man, 58 years of age, usually having good health, had in September last an attack of hemiplegia, without loss of consciousness. He was gradually recovering, but was seized with violent pain in the chest, like angina pectoris, and a double pericardial friction-sound was audible. He died suddenly, November 15, while sitting up in bed to take a glass of water.

Autopsy.—No evidence of extravasation into brain; vessels atheromatous. General pericarditis and recent adhesions. Heart large; left ventricle dilated and hypertrophied; a sacculated dilatation was observed, involving the intraventricular septum and the wall near the apex, capable of holding about two fluidounces: this was filled by a fibrous clot, containing in its centre a small quantity of grumous pus. In the anterior wall the tissues had given way, but the rupture was filled with a small clot, firmly adherent and projecting slightly into the pericardial sac. A similar state of affairs was seen in the ventricular wall, a clot projecting into the right ventricle. Heart-muscle was fatty; atheromatous condition of aorta and semilunar valves, but valves were competent; other valves healthy. Coronary arteries not atheromatous.

Pernicious anæmia. Dy Dr. W. E. HUGHES.

A white man, 45 years of age, having a strong malarial history, was admitted into the University Hospital in a condition of extreme anæmia and exhaustion, with a history of illness of two and a half years' duration. He denied venereal taint. He had suffered from several prolonged attacks of diarrhoea. The blood was pale and watery, and contained six hundred and sixty-five thousand red and six thousand white corpuscles to the cubic millimetre. Eye-grounds pale, no hemorrhages. Urine contained no albumen or sugar. Death was preceded by delirium.

At the *autopsy* the only characteristic changes were found in the bone-marrow; the liver and spleen were not markedly changed.

Dr. FORMAD said that the marrow, especially of the upper extremities, showed in a marked degree the typical currant-jelly appearance first described, he believed, by Drs. Pepper and Tyson.

Dr. J. H. MUSSER said that some of the clinical features of the case were unusual, especially the absence of retinal and other hemorrhages. The heart, too, is usually fatty, and he had thought that medullary bone-changes were unusual, the text-books on pathology containing such statements. He brought the matter forward, as he would like to have some light thrown on such discrepant statements.

Dr. BRUEN thought that the bone-changes occurred more frequently when the case was

idiopathic than when there was a malarial history, as in one case seen by him.

Dr. TYSON said that the description of pernicious anæmia in the pathological text-books was very vague, and no mention was made of bone-changes such as described by Dr. Pepper and by himself in *Virchow's Archives* some years ago. This paper seems to have been entirely overlooked.

Dr. SYDNEY ROBERTS had had the opportunity of examining the fractured femur of a woman suffering from this disease, when he noted appearances identical with those presented by the humerus before the Society this evening.

Excision of the shoulder-joint. Presented by Dr. C. B. NANCREDE.

Anna M., æt. 17 years, was admitted into the Episcopal Hospital May 14, 1883. One year previous she fell down-stairs and struck her shoulder. She was unconscious for a short time, but was soon able to walk home. The arm did not become inflamed. Nine months after the fall she noticed pain in the shoulder, and an elevated papule formed near the joint, which was opened at the dispensary. This relieved the pain, but left a fistulous tract, discharging healthy pus. She was sent into the house because Dr. Seltzer, the assistant surgeon on duty, had found dead bone. After admission, she had pain from time to time, gradually increasing in intensity, until shortly before operation. Other free openings for drainage were made. *Diagnosis*, epiphyseal abscess and strumous disease of the joint.

The operation showed complete destruction of the joint, a carious and denuded humeral head, with an abscess about the epiphyseal site, containing a sequestrum. The glenoid cavity was denuded of cartilage and roughened. The portion of head and shaft such as you see were removed, while all the glenoid cavity was cut away with the gouge-forceps, except where the long head of the biceps was attached. The patient was practically well at the end of two weeks.

Excision of astragalus. Presented by Dr. C. B. NANCREDE.

E. X., æt. 9 years, mulatto, a patient of the Episcopal Hospital, received some slight injury of the right ankle-joint about one year ago, followed by the usual symptoms of strumous arthritis. About two months since, Dr. Packard freely opened the articulation and inserted an oakum seton. Temporary benefit ensued, but February 13, 1884, I found the bone so diseased as to demand excision. This was effected with great readiness by a semicircular incision upon the outer side of the joint, whereby the peroneal tendons were exposed, their sheath partially opened, thus admitting of their being drawn to one side, and the ligamentous structures of the astrag-

alus easily divided. The bone was partially ankylosed to the under surface of the tibia, and nearly all of its tibio-fibular cartilaginous surfaces were bared and carious. All the other tarsal bones seemed perfectly healthy.

Specimens from a case of extensive trephining of the skull. Presented by Dr. C. B. NANCREDE.

These specimens, consisting of nearly the whole right squamous plate of the temporal bone, the inferior angle of the parietal, and a portion of the frontal,—in other words, the anterior two-thirds of the temporal fossa, from the orbital plate nearly to the temporal ridge, and from the external angular process of the frontal to a line posterior to the external auditory meatus,—were removed by me from a man this day who had been struck by an iron lever, which caught his head between it and a large beam. Although the depressed area must have been fully an inch deep, yet he walked into the dispensary of the Episcopal Hospital presenting apparently neither motor nor sensory disturbances, pupils and tongue normal. He was at once sent up to the male surgical ward, and I proceeded to trephine, cut away the overhanging shelf of sound bone with the "rongeur," and thus elevate and remove over a dozen fragments of bone. The dura mater seemed uninjured. As the specimens show, the middle meningeal artery must have been torn and fortunately twisted in removing the fragments, as it was completely surrounded by a bony canal. One branch in the meninges was tied with fine catgut ligature, and the wound, as well as a deep scalp-cut on the opposite side, was dressed with mercuric bichloride. He has done well since (February 26, 1884).

C. B. N.

REVIEWS AND BOOK NOTICES.

A TREATISE ON BRIGHT'S DISEASE OF THE KIDNEYS: ITS PATHOLOGY, DIAGNOSIS, AND TREATMENT. With Chapters on the Anatomy of the Kidney, Albuminuria, and the Urinary Secretion. By HENRY B. MILLARD, M.D., A.M. 8vo, pp. 346. William Wood & Co., New York, 1884.

Dr. Millard's present work, we learn from the preface, is the result of his experience of nearly twenty-six years of hospital and extensive private practice and of several years' laboratory work spent in the study of healthy and pathological kidneys of men and animals.

The opening chapters are devoted to the minute anatomy of the kidney. The author closely follows Heitzmann in histology. He sums up the results of his own investigations in the following statements:

1. The Heidenhain rods in some varieties

OLEATES.

These preparations are salts formed by the union of oleic acid with the respective bases indicated. They are designed for external application, and owe their superiority to the well-known penetrative property of oleic acid. Their medicinal action is entirely dependent on their bases, which are quite readily introduced into the circulation when applied epidermically in this form. As a means of securing the constitutional effects of these bases, their application in the form of the oleates offers many advantages, which will be readily appreciated, especially in the treatment of children and in cases of irritability of the stomach.

Although the advantages to be derived from the combination of bases with oleic acid were recognized as early as 1872, the use of these compounds has not become general, and principally because of defects in the pharmaceutical preparation, the original crude method of their preparation not having been improved upon. Within the past year Dr. J. V. Shoemaker, of Philadelphia, has made the subject of the oleates one of especial study and experiment, both from a pharmaceutical and a clinical standpoint. The result has been the production of a number of very eligible compounds, and the discovery of therapeutic properties hitherto unrecognized. We have secured from Dr. Shoemaker full information touching his methods, and are now prepared to furnish oleates of the following metals, which have been found of great value in the affections indicated:

ALUMINIUM.—A valuable astringent, serviceable in eczema, and as a dressing for burns.

ARSENIC.—This preparation contains twenty (20) grains of oleate of arsenic to the ounce, and is employed as a caustic in the treatment of lupus, epithelioma, etc.

BISMUTH.—An excellent emollient application.

COPPER.—For the treatment of ringworm, etc.

IRON.—Readily soluble in the fats, and use-

ful both as a local astringent and as a general tonic.

MERCURY.—Useful as a discutient to inflammatory exudates, and for the constitutional effect of the metal.

LEAD.—A cleanly and efficient substitute for Hebra's Diachylon Ointment.

SILVER.—An excellent application in pruritus and in erysipelas.

ZINC.—An impalpable powder, and of great value in intertrigo (chafing).

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Aconitine (2 per cent. of the alkaloid).

Atropine (2 per cent. of the alkaloid).

Morphine (10 per cent. of the alkaloid).

Morphine and Mercury (5 per cent. morphine and 20 per cent. mercuric oxide).

Quinine (25 per cent. of the alkaloid).

Strychnine (2 per cent. of the alkaloid).

Veratrine (10 per cent. of the alkaloid).

OINTMENTS OF OLEATES.

These contain the several metals mentioned above. They are much more cleanly than ointments as ordinarily prepared, and for all the properties of ointments are much to be preferred.

Circulars fully descriptive of the above, and such other information touching the therapy of the oleates as has appeared, will be furnished gratis on application.

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This New Tænifuge, the Active Alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tænia Solium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Dujardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and if certain preliminaries are observed success will be insured. Sold only in bottles containing one dose.

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This is a well-defined alkaloid that must not be confounded with Ergotine or other extracts. It is given in doses of from $\frac{1}{4}$ to $\frac{1}{2}$ milligramme (1-240th to 1-120th of a grain) in all cases where Ergot is indicated, viz., Flooding, Post-Partum Hemorrhages, Metrorrhagia, etc., etc. It is put up in the following forms:

Syrup, containing $\frac{1}{4}$ milligramme to each teaspoonful; Dose, from 1 to 6 teaspoonfuls per day.

Solution, for hypodermic purposes, containing 1 milligramme to each cubic centimetre; Dose, from 3 to 10 drops.

The Institute of France has awarded one of its prizes to Mr. Chas. Tanret for the discovery of these alkaloids.

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"The experiments made in the hospitals of Paris have demonstrated that Dr. Rabuteau's Dragées, Elixir, and Syrup regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compte-Globules*."

"The ferruginous preparations of Dr. Rabuteau do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hôpitaux*.

Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragées; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

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of the tubuli uriniferi are part and parcel of a reticulum present within every epithelium.

2. The reticulum, including its elongated rod-like formations, is the living matter proper.

3. The relation of the rods to the rest of the reticulum of an epithelial body varies greatly, the variations being probably due to different stages or degrees of secretion.

4. The reticulum, including the rod-like formations, in the inflammatory process, both in catarrhal and croupous nephritis, gives rise to a new formation of living matter, which results in the new formation of medullary corpuscles or pus corpuscles.

5. The structureless membrane is lined by flat endothelia lying between it and the basis of the epithelia of the urinary tubules.

6. In nephritis, the endothelia become considerably enlarged, and in catarrhal as well as in croupous nephritis they line the urinary tubules after the epithelia have been shed or lost. They surround the cast in croupous nephritis after the epithelia have perished in the formation of the cast.

The nature and sources of the urinary secretion and extractives are next considered, and, in due order, the significance of albumen in the urine and the general conditions of its occurrence in health and disease; the tests for albumen, and the importance and significance of urinary casts and various forms of epithelium. Bright's disease is discussed under the headings croupous, interstitial, and suppurative nephritis. Nephritis without albuminuria receives the attention it merits, the author here insisting upon the importance of oft-repeated examinations of the urine in suspected and doubtful cases, the necessity of the systematic use of the microscope, and the diagnostic value of renal epithelium and pus in the deposits of non-albuminous urines.

The second part of the volume, which is devoted to the treatment of the various forms of nephritis recognized by the author, will be found interesting and suggestive. Familiar methods of treatment and well-known remedies are reviewed in detail, and reference is made with fairness to drugs that are at present attracting attention, but which are yet to undergo more thorough investigation before their value in the treatment of these diseases can be determined. Among these are ergot, fuchsin, sodium tannate, nitroglycerin, helonias dioica, apis mellifica, and euonymus atropurpureus. The author ascribes to the mercuric chlorides the greatest value in the treatment of acute and chronic nephritis. His experience has led him to employ the mild chloride in interstitial, and the corrosive chloride in croupous nephritis. The doses are minute. One part of calomel is triturated with ninety-nine parts of sugar of milk, and of this mixture five to ten grains are administered every two or three hours, care being taken not to act injuriously upon

either the mouth or the bowels. The proportion of corrosive sublimate employed is one part in ten thousand parts of sugar of milk (ten grains containing a thousandth of a grain of the drug), and of this eight to ten grains are given at intervals of two or three hours. We are not informed how long this treatment is to be continued in chronic cases, nor does it rightly appear, from the author's report of acute cases, how long a period is necessary to bring about the happy result which followed. Notwithstanding the high endorsement that the use of opium in the convulsive accidents of nephritis has received by a few authorities, the author is opposed to its administration, despite the benefit it sometimes appears to confer. He scarcely dwells with sufficient emphasis upon the danger of repeated small doses of opium. The accidents and complications of the various forms of the disease do not, we think, receive the attention which is due them in such a work. In the selection of methods of treatment the author is manifestly guided by a spirit of broad eclecticism.

Alike from the literary and the scientific point of view, the book is marred by an air of sketchiness and looseness of make-up. Nevertheless, it will well repay close reading, if it be merely as a review of the present state of a subject which seems to be, just at this time, growing too fast to be properly cultivated.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY. A Systematic Treatise on the Theory and Practice of Surgery, by Authors of Various Nations. Edited by JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-Lithographs and Wood-Cuts. In Six Volumes. Vol. IV. New York, William Wood & Co., 1884. Pp. 987. By subscription.

One of the most satisfactory volumes of the series is the fourth volume of the International Encyclopædia, which fully maintains the high standard of the previous issues of this great work. Although the article on "Diseases of the Bones," by Prof. Ollier, of Lyons, was unavoidably delayed, the other contributions are sufficiently comprehensive and correlated to form a complete and acceptable volume. These are "Injuries of Bones," by John H. Packard, M.D., Surgeon to the Episcopal Hospital and to St. Joseph's Hospital, Philadelphia (260 pages); "Diseases of the Joints," by Richard Barwell, F.R.C.S., Surgeon to Charing Cross Hospital, London (178 pages); "Excision of the Knee-Joint," by George E. Fenwick, M.D., C.M., Professor of Surgery in McGill University, Surgeon to Montreal General Hospital (8 pages); "Tumors," by Henry Trentham Butlin, F.R.C.S., Assistant Surgeon to, and Demonstrator of Surgery at, St. Bartholomew's Hospital, London (178 pages).

mew's Hospital, London (124 pages); "Injuries of the Back, including those of the Spinal Column, Spinal Membranes, and Spinal Cord," by (the late) John A. Lidell, A.M., M.D., Late Surgeon to Bellevue Hospital, New York, etc. (224 pages); "Malformations and Diseases of the Spine," by Frederick Treves, F.R.C.S., Assistant-Surgeon to, and Senior Demonstrator of Surgery at, the London Hospital (73 pages); and an elaborate paper by the editor, on "Excisions and Resections," containing valuable statistical tables. The several articles give an admirable summary of recent knowledge upon the subjects treated, both in pathology and in treatment, and they are profusely illustrated with original cuts, including chromo-lithographs.

GLEANINGS FROM EXCHANGES.

BROMOFORM; A NEW ANÆSTHETIC.—Dr. Horroch reported to the Society of Physicians of Vienna, recently, the results of his experiments with bromoform. The drug, discovered by Lowig in 1832, is prepared by the addition of an alkali to the hydrate of bromal. It has a pungent, aromatic, ethereal odor, and a sweetish taste. It is oily, colorless, is soluble in warm water and ether, and boils at 151° C.

In the experiments referred to, it was found that anæsthesia was easily produced by inhalation; the stage of excitement was short and of a mild form. Animals did not vomit after coming out of this condition, and appeared well.

Hypodermic injections of one gramme of bromoform produced in large animals complete narcosis, lasting for an hour, during which time the temperature fell from 2° to 4° C.

The internal administration of bromoform in doses of from one to one and a half grammes produced sleep of several hours' duration in dogs, rabbits, and cats. Reflex excitability was entirely abolished, and irritation of the sciatic nerve failed to effect any changes in the blood-pressure. The peripheral ends of the vagus retained their irritability; the pulse remained about its usual frequency, but blood-pressure was diminished, and the bodily temperature was also reduced. From experiments made at the surgical clinic, it was found an efficient and rapid anæsthetic, both in adults and in children. It was milder in its effects than chloroform, for which it appears to provide a substitute, but it is not likely that it will supersede sulphuric ether.—*Medical Record*.

ALTERNATE HOT AND COLD APPLICATIONS IN INTERNAL STRANGULATION.—A man 42 years of age, who had some years previously suffered from a severe attack of peritonitis,

was suddenly seized with violent colic. There was meteorism; the abdomen was generally tender on palpation, but more especially at a point a little to the right of the umbilicus. There was no passage either of fæcal matter or of gas from the bowel, and purgatives, whether administered by the mouth or by the rectum, brought no relief. The obstruction of the bowels continued several days, despite an active and varied treatment, stercoraceous vomiting set in, and the patient was rapidly sinking. At this time, all other measures having been tried in vain, Dr. Roux determined to try the effect of the alternate application of heat and cold to the abdomen. An ice-bladder was first applied and retained for an hour, then it was removed and compresses as hot as could be borne were placed over the abdomen. These applications were continued every hour through the day and night. In the evening some gas escaped from the bowel, and the following morning there was a slight stool. A mild purgative was now given, and was soon followed by a copious evacuation, and the patient speedily recovered.—*Lyon Medical*, September 9, 1883; from *The Practitioner*.

MIRGACHIT.—During a journey through Siberia undertaken by Lieutenant B. H. Buckingham and Ensigns G. C. Foulk and Walter McLean, U.S.N.,* they encountered a case illustrating a peculiar condition of the nervous system, which compels the subject to repeat automatically any muscular action, or to obey any command, when it is suddenly brought to his attention. The disorder, which appears not incompatible with perfect physical health, is said not to be uncommon in Siberia, especially about Yakutsk, where the cold is extreme. Both sexes are subject to it, the men less than the women. It is known to the Russians as mirgachit. Dr. W. A. Hammond recently read a short note upon this newly-described disease of the nervous system before the New York Neurological Association, in which he discovers some relation between this malady and the jumpers of Maine and Northern New Hampshire, and also with cases of sudden and transitory epileptiform mania in persons suddenly aroused from sleep.—*New York Medical Journal*, February 16.

STRENGTH OF COMMERCIAL NITRITE OF SODIUM.—The papers on the use of nitrite of sodium by Dr. Hay, in *The Practitioner*, having drawn attention to this drug, the strength of it becomes a matter of considerable importance. This has been clearly shown by the results of Dr. Ringer's experiments upon animals and the disagreeable effects observed by Dr. Murrell in some of his patients

* Observations upon the Korean Coast, Japanese-Korean Ports, and Siberia, made during a Journey from the Asiatic Station to the United States through Siberia to Europe, June 3 to September 8, 1882. Published by the U.S. Navy Department, Washington, 1883.

from administration of the drug. Mr. McEwen has examined a number of specimens, and he finds them to vary enormously, some of them containing only a mere trace of nitrite,—0.011 per cent.,—whereas others contain no less than 98.5 per cent. The large and transparent crystals are almost invariably worthless. The fused nitrite is also weak, whereas the small crystals contain a large proportion of true nitrite. As the drug deteriorates very much when kept in stock for a few months, its strength should be ascertained from time to time by analysis.—*Pharmaceutical Journal*, p. 121, No. 684; from *The Practitioner*.

ANTAGONISM OF ALCOHOL AND STRYCHNIA.—At the last meeting of the Société Française de Tempérance, Dr. Dujardin-Beaumetz read a communication on the "Treatment of Alcoholism by Strychnia" (rather a curious subject, by the way, for a mixed lay and medical audience), in which he noticed the recommendation made some time since by Dr. Luton, of Rheims, that strychnia being now recognized as the appropriate medical agent for alcoholism, the government should authorize its addition to alcoholic beverages, in order to guard against their ill effects. Dr. Dujardin-Beaumetz, however, demonstrated, as the result of his experimental investigations and of observations made on man, that, although strychnia may be advantageously used in combating the symptoms of intoxication and acute delirium caused by alcohol, it is powerless as regards the multiple alterations in different organs which are the results of the presence of alcohol in the different tissues of the economy. Strychnia, therefore, is only, at the very most, a therapeutical agent, capable of causing the disappearance or mitigation of some of the symptoms induced by the abuse of alcoholic drinks.—*Medical Times and Gazette*.

EUTHANASIA OR MURDER,—WHICH?—I had two patients within a year who, when they could not live, found it almost impossible to die. They were both good men, and had looked death in the face more than once without alarm. In the one, after a ten hours' struggle I asked, "Would you like to sleep?" The answer, "Yes," and the expression of joy replacing the anguish, were enough to warrant this consideration of the subject. One injection of morphia, and there was rest in ten minutes, and a sleep that faded into death in four hours. In another, after a night with death, I said to the mother, "Shall he sleep?" There could be but one answer. If it is possible to prevent this suffering and let him sleep, let it be done at once.

I do not believe that it is right for one to take his own life because life is only prolonged misery and suffering; and I do not think it right, in such a case, for the physician to do that which would shorten the man's days. But when death is at the door and will

not be said nay, then to open the door is an act of charity.—*Eclectic Medical Journal*; from *Gaillard's Medical Journal*.

MISCELLANY.

THE BRITISH MEDICAL ASSOCIATION will hold its fifty-second annual meeting on July 29, 30, and 31, and August 1, 1884, at Belfast, under the presidency of James Cuming, M.A., M.D., F.K.Q.C.P.I., Professor of Medicine, Queen's College, Belfast. The Address in Medicine will be delivered by Sir Andrew Clark, Bart., M.D., F.R.C.P., Physician and Lecturer on Clinical Medicine, London Hospital. The address in Obstetric Medicine will be delivered by George H. Kidd, M.D., F.R.C.S.I., Master of the Coombe Lying-in Hospital, Dublin. The address in Physiology will be delivered by Peter Redfern, M.D., F.R.C.S.E., Professor of Anatomy and Physiology, Queen's College, Belfast. Visitors coming from America to attend this meeting can travel by any of the following routes:

1. A "Cunard" steamer will leave (a) New York on Wednesday, July 16, arriving in Queenstown about the following Thursday week, July 24; (b) Boston on Saturday, July 19, reaching Queenstown the following Monday week, July 28.

2. A "White Star" steamer will leave New York on Saturday, July 12, and on Saturday, July 19; due at Queenstown about July 20 and July 27.

3. An "Inman" steamer will leave New York on Tuesday, July 15; due at Queenstown about July 23.

4. An "Allan" steamer will leave Quebec on Saturday, July 19, arriving in Londonderry about the 26th or 28th July.

5. An "Anchor" steamer will leave New York on Saturday, July 19; due at Londonderry on July 29.

Londonderry is ninety-five miles from Belfast, and trains run daily between the two places.

The route from Queenstown to Belfast is from Queenstown to Cork, Cork to Dublin (one hundred and sixty-five miles by train), and Dublin to Belfast (one hundred and thirteen miles).

The time of the meeting of the British Medical Association at Belfast has been fixed so as not to interfere with the International Medical Congress, which is to begin at Copenhagen on the 10th August.

A steamer will leave Hull (England) on August 2 and 9, for Copenhagen; and on August 5 a steamer will leave Leith (Scotland) for Copenhagen. Both these places (Hull and Leith) can be reached on any day by leaving Belfast on the previous evening by the cross-channel steamers. Visitors after attending the meeting of the British Medical

Association in Belfast will have ample time to travel to Copenhagen for the Congress.

Communications in reference to the meeting of the British Medical Association at Belfast should be addressed to the Hon. Local Secretaries, John Moore, M.D., Alex. Dempsey, M.D., and John W. Byers, M.A., M.D.

PRIZE ESSAYS ON THE SUBJECT OF CANCER.—In March, 1882, a prize of one thousand dollars was offered for the best essay—if thought worthy of the prize—on the following subject: Probability of the Discovery of a Cure of Malignant Disease, and the Line of Study or Experimentation likely to bring such a Cure to Light. Dr. J. Collins Warren now reports that only six essays were submitted, none of which was deemed worthy of the prize.

THE MEDICO-CHIRURGICAL COLLEGE lost two of its faculty by death during last month. Dr. Frank O. Nagle died February 1 with typhoid fever; and Dr. Geo. P. Olliver, on February 20, died with apoplexy, being suddenly taken while in attendance at his lodge. They were both graduates of the University of Pennsylvania.

NOTES AND QUERIES.

HELLER'S TEST FOR ALBUMINOUS URINE MODIFIED.

EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR DOCTOR,—Heller's test (cold nitric acid overlaid with urine) may, at times, mislead even those who have had experience in the analysis of urine. The fallacy liable to occur is the formation of a zone of *acid urates* which are but sparingly soluble in cold water. A suspected urine contains also, let us say, an abundance of urates *in solution*. This urine is added to the cold nitric acid in the tube, and you obtain a zone resembling albumen. If this zone be the acid urates thrown out of solution, or rather formed from the neutral urates by the action of the cold nitric acid, and less soluble in cold water than the neutral salt, the application of heat will dispel it (the zone). But this is a delicate procedure. The fluids and zone get mixed up, and thus you lose your experiment. I use Heller's test, but *modify* it thus:

Boil the nitric acid, and while *boiling* add the urine. The hot acid imparts its heat partially to the supernatant urine, and, if a zone be formed, *it is albumen and nothing else*. The acid urates are soluble in heated aqueous solutions, hence the heat from the boiled acid is sufficient to dissolve the salt. By the modification I have adopted I avoid, in the cases specified, much annoyance, and am assured of the accuracy of the result. A zone by Heller's test, *modified* as stated, means albumen, and, further, no other test for albumen has in my hands detected smaller amounts of albumen than Heller's test, *using boiling-hot* nitric acid in place of the cold acid.

Yours truly,

HENRY C. BOENNING,
528 Franklin Street.

OBITUARY NOTICE.

THE body of Passed Assistant Surgeon Ambler, U.S. Navy, one of the victims of the unfortunate "Jeannette" expedition, on February 23, was taken in charge at the Navy Yard, Brooklyn, by the escort,—Chief Engineer Melville, Surgeon Gravatt, Lieutenants Jacques, Danenhower, and Schuetze, and Passed Assistant Surgeons Harman, Gaines, Rixey, and McClurg; they were joined at Baltimore by Prof. L. McLane Tiffany, M.D., of the University of Maryland, G. Guy Holliday, M.D., James McHenry Howard, M.D., Ridgely Howard, M.D., and Henry Howard, Esq., of Baltimore, and at Washington by Medical Directors Browne and Gihon, Surgeons Van Reyepen and White, and Passed Assistant Surgeons Streets, Green, and Nash. The cortege found at Markham Station a large gathering of the people of Fau-

quier County, and from thence passed to Leeds Church, five miles distant, where the final ceremonies were held on February 24.

The services were concluded at the grave, which was in the adjoining churchyard, by the side of his father and brother, and after the grave was filled the new-made mound of earth was quite concealed from view by the great profusion of wreaths, crosses, and other floral offerings, expressions of loving memory of friends at home and tokens of admiration of heroic devotion to duty from strangers in Siberia, Russia, and Germany. The pall-bearers were Medical Directors John N. Browne and Albert L. Gihon, Acting-Chief of the Bureau of Medicine and Surgery William K. Van Reyepen, Surgeon Charles H. White, Chief Engineer George W. Melville, and Lieutenant John W. Danenhower, surviving shipmates of Dr. Ambler on board the "Jeannette," Lieutenant William H. Schuetze, who brought his body from Siberia, and Lieutenant William H. Jacques, the personal representative of the Secretary of the Navy.

The late colleagues of Dr. Ambler in the Medical Corps of the Navy are taking measures for the erection of a monument over his grave in Fauquier, and the Medical Faculty of the University of Maryland will place in their hall a memorial tablet.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 17, 1884, TO MARCH 1, 1884.

BROWN, JOSEPH B., LIEUTENANT-COLONEL, and BILLINGS, JOHN S., MAJOR,—SURGEONS.—Directed to attend the International Health Exhibition in London, and, as delegates, the International Medical Congress at Copenhagen, to be held in May and August next, respectively; also, to include Berlin on their route to or from Copenhagen, and to be governed by special instructions from the Surgeon-General in complying with this order. S. O. 44, Paragraph 8, A. G. O., February 21, 1884.

WOODWARD, JOSEPH J., MAJOR AND SURGEON.—Leave of absence still further extended six months on account of sickness. S. O. 44, Paragraph 11, A. G. O., February 21, 1884.

HORTON, S. M., MAJOR AND SURGEON.—Having reported at these Headquarters from leave of absence, ordered to Fort Hays, Kansas, for duty. S. O. 40, Paragraph 2, Headquarters Department Missouri, Fort Leavenworth, Kansas, February 20, 1884.

PATZKI, JULIUS H., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended one year on surgeon's certificate of disability, with permission to go beyond sea. S. O. 43, Paragraph 9, A. G. O., February 20, 1884.

MADDOX, T. J. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at Meyer's Springs, Texas. Per Post Orders No. 27, Paragraph 1, Fort Clark, Texas, February 13, 1884.

DIETZ, WILLIAM D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at U.S. Military Academy, West Point, New York.

PHILLIPS, JOHN L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty in Department of the East.

MEARNS, EDGAR A., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty in Department of Arizona.

KNEEDLER, WILLIAM L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty in Department of Dakota.

BLACK, CHARLES S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty in Department of Texas. S. O. 46, Paragraph 1, A. G. O., February 25, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM FEBRUARY 17, 1884, TO MARCH 1, 1884.

P. A. Surgeon F. S. NASH, detached from the U.S. steamship "Dispatch," and waiting orders.

P. A. Surgeon W. H. RUSH, detached from the "Minnesota," and ordered to duty on board the "Dispatch."

P. A. Surgeon J. H. HALL, to the "Minnesota."

Assistant-Surgeon H. M. WHITAKER, from the "Portsmouth," and on sick-leave.

P. A. Surgeon E. H. GREEN, from Museum of Hygiene, and waiting orders.

PHILADELPHIA, MARCH 22, 1884.

ORIGINAL COMMUNICATIONS.

THE BACILLUS TUBERCULOSIS AND THE ETIOLOGY OF TUBERCULOSIS.—IS CONSUMPTION CONTAGIOUS?

SECOND COMMUNICATION.

*Read before the Philadelphia County Medical Society,
November 14, 1883,*

BY H. F. FORMAD, B.M., M.D.,

Lecturer on Experimental Pathology and Demonstrator of Morbid Anatomy in the University of Pennsylvania; Mitter Lecturer in the College of Physicians of Philadelphia.

(Continued from page 384.)

V.—THE BACILLUS TUBERCULOSIS—ITS NATURAL HISTORY, MORPHOLOGY, DETECTION, HABITAT, SIGNIFICANCE, AND DIAGNOSTIC VALUE.

I WILL now speak about the bacillus proper, and will allude here briefly to its natural history, morphology, habitat, significance, detection, and diagnostic value.

The bacillus discovered by Koch, of Berlin, as is well known, is a vegetable organism, and belongs, according to Cohn's classification, to the group of filamentous bacteria (Desmo-bacteria), variety Bacillus.*

The tubercle-bacilli form, according to Koch, a species of bacillus by themselves, and on Koch's authority as a *mycologist* we can accept this statement as correct until proved otherwise.

The tubercle-bacilli present themselves as thin, slender rods, in length varying from one-third to the whole of the diameter of a human red blood-corpuscle; in breadth they do not exceed one-fifth to one-tenth of their length. They vary in size in different locations, and, according to observations made by myself conjointly with George Bodamer, my assistant, they vary also greatly in size in different artificial culture-media. In nearly dry soils they appear, as a rule, much smaller than in moist soils. They are blunt at the ends, and frequently contain unstained spores in varying number which give them a beaded appearance that might be (and has been) mistaken for short torula chains of micrococci. The rods are sometimes slightly curved, and they frequently appear in

pairs, forming a V-shaped figure; occasionally the rods are seen crossing one another. Often they appear within animal cells in tissues and other matters which they invade, quite isolated and scanty, so that there may be seen only a few bacilli, or only one bacillus, in a whole microscopic field. Sometimes they occur in large, dense masses, particularly so and most commonly within and around cheesy masses in lymph-glands, and in the cheesy fragments met with in the contents of lung-cavities, as Koch himself first pointed out.

It may be of interest to note that tubercle-bacilli may considerably multiply in sputum when it stands in a bottle for some time, as first observed by Bodamer in my laboratory. Williams, of the Brompton Hospital for Consumptives, records also that he has seen the bacilli multiply in sputum after standing in a warm room for ten days.

For demonstrative purposes it is well to inspissate tuberculous sputum or to dry it (as I have seen in Koch's laboratory); for examination it is then moistened with water, and it will then show more bacilli than when fresh.

The methods of detecting the bacillus are so well known that I will not consider in this communication the merits of the different dyes employed. Moreover, success does not depend upon the method or the dye, but mainly upon the skill and the accuracy of the dyer.†

As is generally known, the principle in staining bacilli rests upon the fact that bacteria absorb and retain aniline dyes more readily than do the surrounding animal organic materials which they inhabit. When sputum dried upon a glass cover, or a section containing them, is well stained, for instance, by aniline violet, and then washed in very dilute nitric acid, only the bacilli will retain the dye, while all the rest of the organic material composing the specimen will be decolorized, and may readily be stained by some other dye without modifying the violet color of the bacilli.‡

*The statements made by Beneke, Klebs, and Schmidt, that the bacilli are crystalline bodies, have been withdrawn; while views to the effect that "bacilli" are to be identified with blood-fibrin, etc., were at no time taken into serious consideration by microscopists.

†To detect bacilli is a very simple matter, although by far not so easy as to prepare a specimen of urine and to find the all-important tube-casts; and yet how many physicians (even those perfectly familiar with microscopic technology) will be sure when they discover tube-casts, if they attempt to examine the urine at all?

‡The staining fluids for bacilli we more commonly use are those after Ehrlich's formula, slightly modified:

First Stain.—Watery saturated solution of aniline oil, five

A magnifying power of four hundred diameters is nearly always sufficient to detect stained tubercle-bacilli. In fact, we found that where we failed to find bacilli with a good one-fifth objective, neither our one-twelfth Zeiss oil immersion lens nor the Abbé's condenser would reveal any when used (as we always do) for control. If the bacilli are very numerous (as sometimes in lymphatic glands), a mass of them may be recognized easily by the naked eye in a well-stained section as a small stained speck.

Occasionally bacilli may also be seen when unstained. Baumgarten* discovered the same tubercle-bacillus simultaneously with, and independently of, Koch, in unstained caustic potash preparations of tubercle-tissues. Koch† also states that tubercle-bacilli may be readily seen, especially in artificial tubercles when simply teased in water, or preferably in blood-serum. We have also observed tubercle-bacilli, without resorting to staining, in cultures such as chicken *bouillon*, identifying them subsequently by means of the usual staining process. In stained preparations too much washed in acid, or in specimens ill preserved, a part or all of the tubercle-bacilli may also be seen decolorized, though still quite distinctly visible.

Tubercle-bacilli are, as a rule, motionless as seen in stained preparations made from the substances they inhabit; but the observations of Bodamer and myself appear to show that the bacilli of Koch may also have an actual (not communicated) motion when for some time cultivated in liquid media. But at the same time it was observed that the development of the cultures was not as extensive in liquid media (*bouillon*) as in a solid medium (coagulated

blood-serum). Conversing with Koch on this point last summer, he remarked that this was quite possible, and suggested that perhaps the bacilli in their movable state acquire flagelli or cilia at the ends, although he had not yet made such observation. Koch, quite properly, does not seem to consider that motion is an invariably differentiating feature for bacteria.

In cultures (coagulated blood-serum being the preferable nidus) the tubercle-bacilli grow as a dry, scaly, tortuous, whitish-gray mass, spreading themselves exclusively on the surface. The growth is very slow, and is favored by a temperature of 30° to 40° C. (86° to 104° F.).

Dr. Koch kindly demonstrated to me a number of specimens of bacilli, and in particular the appearance of these bacteria exhibiting under low amplification the peculiar S-like figure in the growths in masses. Koch seems now to lay more stress upon this low-power appearance and upon the pathogenetic properties of the bacillus tuberculosis, as a distinguishing feature from other bacilli, than upon the color test. During the conversation he admitted that some other bacilli may also yield the same micro-chemical reaction as the tubercle-bacilli, but insisted that the latter bacilli cannot be stained brown. The failure of the tubercle-bacilli to take the brown stain, he said, was the reason that they cannot be well photographed (blue- and red-stained objects not being suitable for photographing). He obligingly explained to me the details of his methods and the determination of the value of cultures. I learned from him that those cultures in which the bacilli have no spores are not capable of propagation, nor are they fit for inoculation of animals.

Klebs, to whom Koch had given some of his cultures of tubercle-bacilli, declared that they also contained micrococci. Koch presumes that Klebs has misinterpreted the granules of the coagulated blood-serum (in which they grew) as micrococci. I can testify that bacilli alone were present in those cultures of Koch which I had the opportunity of examining. This is also true of a bacillus-culture in a flat salt-dish obtained from Koch's laboratory by Dr. Shakespeare of this city; this culture was still perfectly pure (and free of micrococci) when examined by Dr. Shakespeare and myself, three months after the arrival in America.

Concerning my own bacillus-cultures

parts; alcoholic saturated solution of aniline violet, one part; mix and filter.

Second Stain.—Watery solution either of vesuvium or of Bismarck brown; filtered.

Direction for Preparation and Order of Staining.—Sputum in thin layer smeared upon glass cover and well dried; immerse (a) into first stain for twenty-four hours (rapid staining being not reliable in doubtful cases); (b) into dilute nitric acid (one to five parts of water) for two or three seconds; (c) wash in alcohol; (d) into second stain for two to five minutes; (e) wash in water and then in alcohol; (f) dry it and mount in Canada balsam or glycerine. Failures to detect bacilli will occur: first, when specimen consists of salivary mucus instead of expectorated material; second, when sputum too thick or too thin is smeared upon cover; third, when not enough heated in drying, or when burned; fourth, when too long in acid; fifth, when too much washed; sixth, when bacilli are absent; seventh, when not recognizing them.

For preparations to be kept, and for tissues, the fuchsine dye, as first stain, is preferable, and certain modifications of method necessary.

* Med. Centralblatt, 1882, No. 15.

† Berliner Klin. Wochenschr., 1882, No. 15.

which I recommenced last autumn (and which are now more often successful than before I went to Berlin, through the use of the complete outfit of Koch's apparatus, supplied by the University of Pennsylvania) I will report later. But it may be said that, even under the most favorable conditions, to obtain success with the tubercle-bacillus culture is at times a difficult task.

Before leaving this part of the subject I must say that I owe many thanks to the director of the German Imperial Board of Health, Dr. Struck, and to Dr. Koch and his assistants, for the very liberal and kind treatment which they extended to me in their laboratory; also for allowing me to study the whole working of their famous institute, and demonstrating to me their methods of work, including the construction of their ingenious apparatus, and permitting me to exercise all the important manipulations in bacteridian studies after Koch's method; and, furthermore, for allowing me to prove that I had succeeded also in staining and recognizing the tubercle-bacillus before I went to them.

I cannot blame Koch for not demonstrating to me how to produce genuine induced tuberculosis with his bacillus within eight days, a favor which he extended only to Watson Cheyne;* not because I have not yet the "faith" in the infallible action of the tubercle-parasite, but because Koch was then working at the subject himself, and does not consider the task as much finished as his over-zealous followers do. I was, moreover, informed, while in his laboratory before leaving Berlin, that no one besides himself and his assistants ever worked in the laboratory on the tubercle-bacillus beyond staining tissues, sputa, etc., containing it. Besides, the cultivation of the tubercle-bacillus takes a longer time than usually is allowed to outsiders who come to be instructed in Koch's laboratory.†

* See Practitioner, April, 1883, page 249.

† I found that the "pilgrims from all nations" who (through influence brought to bear upon the authorities) succeed in being admitted for a while to Koch's laboratory, are instructed principally in the most rudimentary manipulations of mycology; and to most of them the assistants have first to point out what a bacterium looks like. Besides these "pilgrims," the German Government sends regularly young sanitary officers to be instructed in mycology. Of course this is a very useful matter to the "pilgrims" and to the young sanitary officers, even if only one out of twenty-five ever devotes himself to mycology; but it is no beneficial matter to Koch and his kind assistants, who, through this constant interruption, are terribly interfered with in their scientific work. In fact, the working of the Imperial Laboratory is sometimes completely delayed in this way, as it was last summer, during the Hygienic Exhibition. Yet the beneficial influence

The Habitat of the Tubercle-Bacillus.—After reading most of the numerous compilations in reference to the present standing of the tuberculosis question, it would seem that Koch has established that his tubercle-bacillus is always associated with tuberculosis, and with the diseased products and the various excreta in this disease,—and in this disease alone. Since Koch's publication appeared, a number of observers, authoritatively and otherwise, assert the invariable presence of the bacillus in *all* tubercular products; and, further, it is claimed as a proved matter that the bacillus is found in the beginning of the disease,—viz., in the youngest tubercle-tissues.

This is, however, not in accordance with the facts. Neither in Koch's own publication nor in the records of any microscopist (when the original papers are examined) is the invariable presence of the bacillus in tuberculous lesions or excretions and its absence in non-tuberculous matters either clearly shown or proved. Moreover, the authors of nearly all the literary productions are in favor of the contagiousness of tuberculosis, and they disregard, as a rule, the negative evidence.

The question of the occurrence, and partly that of the significance, of the bacillus called by Koch the *tubercle-bacillus* in tuberculous lesions divides itself into several parts, and hinges upon the results of the following investigations:

1. The examination of tissues affected by tubercular disease for the bacillus; and, if present, the time of its occurrence.
2. The examination, *intra vitam*, of blood of tubercular patients.
3. The examination of the products discharged or eliminated with the excretions by individuals suffering from tubercular disease.
4. The examination of air,—viz., of the breath of phthisical patients, and of the air of sick-rooms and hospitals generally.
5. Comparative studies in animal tuberculosis.
6. The occurrence of bacilli in lesions and substances other than tubercular.

I will state now, briefly, what so far have been the results of the investigations upon these points.

1. Tubercle-bacilli have been detected

upon sanitary science which this excellent institution exerts is very great.

quite often in the various forms of tubercles of lung, and in scrofulous and tuberculous lymphatic glands; and likewise, although not so frequently, in tubercles of the various serous cavities; and in tubercular ulcerations of the mucous membranes and the skin. But it must be noted that only a few microscopists have recorded examinations of tubercle-tissues for bacilli, and among these there was *not one* who did not meet with a case or a certain number of cases in which tubercle-bacilli were either totally absent in the tissues or only present in some of the tubercles. The great bulk of bacillus work done comprises merely examinations of sputum.

The facts concerning bacilli in tissues are as follows:

Koch* found bacilli in the majority of tuberculous lesions he examined, but still not in all, as he states himself: he only *supposes* that his bacilli, even if they escape observation, are still present in all cases and in all tubercles. His proposition, however, that in some tuberculous lesions only unstained spores of tubercle-bacilli are sometimes present, or that bacilli may be invisible, and not taking the staining when dead, or even may be absent if the tuberculous process comes to a "stand-still," is, of course, purely hypothetical. There is still another good reason for the assumption that the proportion of non-bacillary tubercles may be much larger in Koch's own examinations. As Koch says himself, he pre-eminently recognizes only such structures as tubercular which contain his bacillus, regardless of their morphology otherwise: it is therefore possible that he may have innocently excluded a number of non-bacillary tubercles from the list of his tubercle records. Koch himself, however, says that he failed to detect bacilli in some scrofulous glands and in two cases of tubercular synovitis, and further admits the prevalence of bacilli in degenerated tissues.

As far as examination of tubercle-tissues for bacilli is concerned, only the following observations besides those of Koch are recorded (so far as is known to the writer), and with the following results:

Dr. Geo. M. Sternberg, U.S.A.,† who is a man recognized as a competent mycologist, here as well as in Europe, failed

to find tubercle-bacilli in the lesions of several cases of tuberculosis.

Heneage Gibbs‡ also failed to discover bacilli in a number of tubercles, particularly in the reticular form: in fact, he had met several times with non-bacillary tuberculosis. Gibbs states§ that "he had examined the lungs of guinea-pigs which had become tuberculous after being kept in the air-shafts of the Brompton Hospital for Consumptives, and had found no bacilli in them; and he knew of an instance in which a guinea-pig, inoculated with sputum from a case of phthisis, presented a glandular abscess in the thigh which abounded in bacilli, whereas the internal organs, although full of tubercles, did not yield a single bacillus."

I do not think it likely that Heneage Gibbs, with his large experience and universally-recognized skill in bacteria-stainings, would fail to discover bacilli if they had been present.

Watson Cheyne,|| whose anatomical conception of tubercle is inseparable from the bacillus, of course says that non-bacillary tubercles, like the above, are no tubercles at all. Hence his statement, that in all tuberculous structures (that is, in all structures which *he* calls tubercle) the bacilli are invariably present, is, from his standpoint, perfectly warrantable. He also confirms the fact that recently-formed tubercle-nodules made up of young lymphoid cells are, as a rule, without the bacilli, while the older tubercles always containing epithelioid cells (on account of retrograde changes) usually do contain bacilli. Now, Watson Cheyne, in this connection, with great self-confidence propounds, "The bacilli being the cause of this disease [tuberculosis], only the nodules containing epithelioid cells are tubercle."¶ Still, the same writer has expressed surprise** that "very extensive tuberculous processes may be found in animals with only very few bacilli."

T. M. Prudden, of New York,†† who made extensive and excellent morphological studies in reference to the occurrence of the bacillus in tuberculous lesions, *failed to find bacilli in any part of the body in three cases of profuse tuberculosis*. In one case of Prudden's the tubercle-bacilli were

† London Lancet, February 24, 1883.

‡ Lancet, February 12, 1883.

§ Practitioner, April, 1883.

¶ See p. 309, loc. cit.

** Page 316.

†† Medical Record, April 14, and *ibid.*, June 16, 1883.

* Berliner Klin. Wochenschr., No. 15, 1882.

† Phila. Med. News, 1882.

abundant in the walls and edges of a lung-cavity and its immediate vicinity, while no bacilli could be found in the diffuse and miliary tubercles of the rest of the body. Prudden further states, "In a large proportion of the cases in which bacilli were present they seemed to have a decided predilection for tubercle-tissue in a degenerated and disintegrating condition, either cavities in the lungs, cheesy and breaking-down areas, or tubercular ulcers; although present with great frequency in small numbers in well-formed, intact tubercle-tissue. . . The bacilli were present in greater abundance in the respiratory organs and intestinal tract than in other parts of the body less directly in communication with the external world. It is further evident that in nearly every case there are many miliary tubercles of all forms, and in many cases much diffuse tubercle-tissue from which the bacilli appear to be entirely absent."

Spina* did not succeed in detecting bacilli in a number of cases. Even if the number of Spina's failures to see the bacillus should be larger than in cases of other observers, Koch's favorite demolishing argument that Spina and all others who failed to detect the bacillus in any case do not know *what* that parasite of his looks like, is entirely unjustifiable. Moreover, Spina's work was controlled by no less an authority than Stricker, of Vienna, and the correctness of the results of the investigation in its essential parts is vouched for by Stricker.

Cornil and Babès† detected the bacillus in the lesions of a number of cases of tuberculosis; but they also showed that bacilli are totally absent in some cases, and not constant in otherwise typical tuberculous lesions.

Malassez and Vingal,‡ from the results of observations of their own, state that there seems to be no doubt that true tuberculous lesions occur which possess very few or even no tubercle-bacilli.

Fräntzel,§ in a discussion before the Berlin Medical Society, stated that he found a number of scrofulous (tuberculous) ulcers and lymph-glands not to be "bacillary."

C. Macnamara|| reports a case of pri-

mary tuberculosis of bone and of the marrow of bone, in which no trace of tubercle-bacilli could be discovered in any of the lesions.

George Bodamer, having succeeded in staining and demonstrating the bacillus in sputum and in tissues in the spring of 1882 (immediately after the announcement of its discovery and the method of its staining by Koch, and probably prior to any one else in America), and having worked together with me nearly incessantly in bacillus stainings and cultures ever since (including also a certain time in the pathological institutes in Germany), also failed to detect the bacillus in a certain number of typical tuberculous lesions of various kinds.

As will be seen from my report, I found tubercle-bacilli to be absent (or I could not detect them, if this expression should be preferred) in four cases of primary peritoneal tuberculosis, in two cases of primary tubercular pericarditis, in one case of tubercular joint-disease, and in several cases of miliary tuberculosis: this does not include some cases of induced animal tuberculosis which did not show bacilli.¶

Dr. Lawrason, of New Orleans, who worked with me last spring in the pathological laboratory of the University, and who had demonstrated his skill in staining bacilli in tissues before the Pathological Society of Philadelphia and elsewhere, also found tubercle-bacilli wanting in some of the most typical tuberculous lesions.

Weigert, Bollinger, Baumgarten, Ziel, Councilman Schuchart, and Krause, and Koch's own assistants, are yet to be mentioned as having recorded a few examinations of tuberculous tissues for bacilli with negative and varying results; but detailed statements of their investigations in this direction are not known to me.

The direct conclusion to be drawn from the total evidence relating to bacilli in *tissues* just quoted is, that tubercle-bacilli are not invariably present in even typical tuberculous lesions; furthermore, that none of the investigators brought forward any proof or evidence that the bacilli are present or appear in the beginning of the disease. On the contrary, the results of the investigations of all observers, including

* Studien über Tuberculose, Wien, 1883.

† Le Progrès Médical, 1883.

‡ Le Progrès Médical, No. 20, 1883, and in a second communication quoted by the Lancet, December 15, 1883.

§ Berliner Klin. Wochenschr., December, 1883.

|| Brit. Med. Journal, December 15, 1883.

¶ At this point I wish to correct an impression which a certain statement in one of my former communications on this subject seemed to convey,—namely, that bacilli are invariably present in tuberculous products.

those of the discoverer of the bacillus himself, point plainly towards establishing the fact that tubercle-bacilli inhabit pre-eminently disintegrated tissues.

2. *Examinations of the blood and lymph intra vitam* of patients suffering from tubercular disease, which in my opinion would be quite an important matter in the study of tuberculosis, are not recorded by any observer. All attempts which we made in examining the blood of tuberculous patients during life gave, as will be recorded later, negative results. It is true that we observed in specimens post mortem some blood-vessels filled with thrombi containing a few bacilli. Further, there are records by Cornil, Weigert, Ponfick, and Koch relating to bacilli observed post mortem in the walls of veins, of large lymph-ducts, and of arteries, in tuberculous cases. As to the route and manner by which the bacilli gained entrance to these places inferences might be drawn, but no definite conclusions arrived at until the bacilli have been observed during life in the blood or lymph. I will not touch upon this part of the question at present.

The blood from cases of hæmoptysis^{as} expectorated has been examined by Hiller* and Williams† and bacilli discovered, but no inference from this can be made as to the bacilli in the circulating blood.

3. *Examination of products discharged or eliminated with the excretions* by individuals suffering from tuberculosis has been practised quite extensively and by a number of observers especially in reference to phthysical sputum. To these sputum-examinations I will return immediately.

There are a few investigations recorded in reference to tubercle-bacilli in the fæces, in discharges from the ears and in those from the nose, and in urine voided by patients affected with local tuberculosis of the pertaining parts. Tubercle-bacilli were often detected, and thus a diagnosis of tubercular enteritis, tubercular otitis, and tubercular meningitis (if bacilli in nasal discharge) and tuberculosis of the urinary tract, was made.

The tuberculous nature of ulcers, of synovitis, and of surgical lesions of various locations, it is claimed has been occasionally settled (?) in this way.‡ But, on

the other hand, the discharges from some typical tuberculous lesions failed to show bacilli.

Damsch § claims that tuberculosis of the genito-urinary tract can be diagnosticated by inoculating a drop of urine from such a case into the anterior chamber of the eye of a rabbit, which operation will be followed promptly by iris tuberculosis in the animal. This latter observation, however, I believe, requires confirmation.

The examinations of sputum, practised now probably by all microscopists in the world, proved to be of much more value. I will quote the observers who made and recorded more or less extensive examinations of sputum, and the results and conclusion they arrived at, to show that there are some points which are misinterpreted by some clinicians and others.

Koch || does not claim that sputum from every phthysical case contains bacilli: he met with cases without bacilli in sputum. He did not find, however, bacilli in cases said not to be tubercular.

Ehrlich ¶ records twenty-six cases of phthisis in which bacilli were invariably present in the sputum; in other lung-affections similar bacilli were not found.

Balmer and Fräntzel** examined one hundred and twenty cases of phthisis for bacilli with positive results, and came to the conclusion that the quantity of bacilli was in direct proportion to the gravity of the disease, and that the bacilli were larger and often contained spores in acute cases, and were smaller in size and quantity in chronic cases. They never saw bacilli in the sputum of cases other than phthisis. They also quite properly conclude "that the sputum affords to bacilli a more favorable place of growth than does the still living lung-tissue," because they found bacilli to be extremely scanty in the tuberculized lung-tissue surrounding a cavity, while the contents of the latter and cheesy degenerated parts of the lung were crowded by them.

Heron †† records sixty-two cases of examination of phthysical sputum, in which bacilli were constantly present.

D'Espine ‡‡ records examination of sputum from twenty-five cases, but could not

* Deutsche Med. Wochenschr., No. 47, 1882.

† London Lancet, February 24, 1883.

‡ Schuchart and Krause, in Volkmann's Clinic, Chirurg. Centralblatt, 1883.

§ Deutsch. Arch. f. Klin. Med., 1882.

¶ Loc. cit.

** Deutsche Med. Wochenschr., No. 19, 1882.

†† Berliner Klin. Wochenschr., No. 45, 1882.

‡‡ London Lancet, February 2, 1883.

¶¶ Ibid., January 13, 1883.

confirm the correctness of the assumption that the bacilli stand in any relation of quantity to the gravity of the disease, although he affirms that they are constantly present.

Williams,* having examined the sputum of one hundred and thirty cases for bacilli, with only three negative results, concludes, however, that there was "no definite ratio between the activity of the disease and the number of bacilli, although they were few in cases where the disease was quiescent."

Kowalsky† claims to have examined the sputum of six hundred cases of phthisis, with bacilli nearly invariably present.

Chiari,‡ in a number of cases examined, never failed to find bacilli.

Detwiler and Meissen§ examined eighty-seven cases of phthisis, finding bacilli in all but two. Although bacilli were more numerous wherever great destruction of lung-tissue existed, they did not observe any definite ratio of bacilli in sputum to the gravity of the disease. The presence of elastic tissue in sputum they consider as significant for diagnosis and as constant as that of bacilli.

S. West|| found bacilli present in every case of phthisis which he examined, though in some cases they were in such small numbers as only to be found after repeated and very careful examination. He further adds, "The more cheesy matter or fluid from a cavity there was in the expectoration, the more bacilli we might expect to find; consequently, in a case of acute tuberculosis, before breaking down of the lung, we should expect to find none." He also states that there seemed to be but little variation in the size of the individual bacilli in different cases, although bacilli in acute cases appeared to contain spores.

R. S. Smith¶ records seventy-seven cases in which he had made the examination of sputum: of these, forty-nine were from "tubercular phthisis," and invariably showed bacilli; the remaining twenty-eight, comprising various other affections of lungs, some of them closely simulating phthisis, did not show bacilli. The affections examined with negative results were

such as "chronic bronchitis, bronchiectasis, chronic syphilitic pneumonia, slight hæmoptysis with no evidence of any disease, chronic pleuro-pneumonia with dulness on percussion and copious purulent expectoration, chronic pleurisy, apex pneumonia with subsequent breaking down from gangrene and with cavity (?), sarcoma of lung, gray hepatization, congestion from mitral disease, diabetes with bronchitis, two cases with strong family history of phthisis, cough with purulent expectoration, but with no evidence of local disease in lungs," etc. Bacilli were also wanting in "slight phthisical cases when the patients were rapidly recovering." I think, however, that errors in physical diagnosis can by no means be fully excluded here.

Heneage Gibbs,** from his extensive observations, states that the sputum did not show bacilli in some cases which upon the autopsy-table showed the lungs riddled with tubercular masses: he explains that the patient died before the destructive process had gone far enough to cause the bacilli to be ejected.

Whipham†† records twenty cases which he studied in relation to bacilli in sputum, and made the observation that the bacilli disappear from sputum at times when the condition of the patient improved.

The report upon the examinations of sputum for bacilli from the pathological laboratory of the University of Pennsylvania will embrace the results from nearly two hundred cases of pulmonary diseases observed. These show that bacilli in sputum are diagnostic, but not prognostic, in phthisis; that the old-fashioned test, the presence of pulmonary elastic tissue in sputum, is a very reliable one (gangrene and abscess being so easily excluded); and, further, that the absence of tubercle-bacilli in sputum proves nothing.

Spina and Stricker‡‡ met tubercle-bacilli in simple bronchiectasis, bronchitis, croupous pneumonia, etc.

Sattler, in the translation of Spina's book,§§ page 164, adds the record of an autopsy of a case of similar nature mistaken for phthisis on account of bacilli in sputum.

Kundrat||| related a case which occurred

* London Lancet, February 24, 1883.

† Wien. Med. Presse, February 24, 1883.

‡ Ibid., No. 1, 1883.

§ Berliner Klin. Wochenschr., Nos. 7 and 8, 1883.

|| London Lancet, February 10, 1883.

¶ British Med.-Chirurg. Journal, July, 1883.

** London Lancet, February 24, 1883.

†† Ibid., February 10, 1883.

‡‡ Loc. cit.

§§ Cincinnati, 1883.

||| Discussion before the Vienna Medical Society, Wiener Med. Presse, 1883.

in the spring in Nothnagel's clinic, where a diagnosis of tuberculosis was based upon the detection of bacilli; but, post mortem, the case proved to be one of chronic catarrh with bronchiectasis. He also mentioned a case, under Prof. Schrötter, where bacilli were repeatedly found by himself and others, and the necropsy showed only bronchitis and emphysema. Hence he was not disposed to admit that the discovery of bacilli in the sputum was absolutely diagnostic of tubercle.

Riegel, of Giessen, and others, failed to find bacilli in the sputum of cases of diabetic phthisis. But I think the diabetes had nothing to do with keeping the bacilli out, as I have detected multitudes of bacilli in the sputum from a case of diabetic phthisis observed and confirmed by autopsy by Dr. Charles H. Reed, of this city.

Levinsky* and Koryanyi† both detected tubercle-bacilli in the sputum of patients with syphilitic lesions of the lung.

It is very probable that many of the cases of pulmonary disease in which bacilli were not discovered might nevertheless have been phthisical: in fact, the character of the control cases, as given by R. S. Smith (quoted above), fully justifies such assumption. From the autopsy-experience of clinicians and pathologists whom I consulted, and from observations of my own, I can testify that the only sure way to decide the nature of doubtful cases, such as, for instance, those recorded by Smith, is the autopsy; otherwise the negative evidence in relation to bacilli goes for naught. This is also substantiated by the observations of Gibbs, Whipham, and West, quoted above,—viz., that bacilli may fail to appear in sputum where there are no cavities and no ulceration in the lung. I have seen autopsies reveal phthisis in cases where no bacilli were found during life, after careful examination over and over again repeated; and I also happened to witness the autopsies of three cases of non-tubercular lung disease which during life had been diagnosticated phthisis on account of bacilli discovered in the sputum.

The examination of sputum may thus, in doubtful cases, be quite misleading; for, if in any given case bacilli are not found, it should be taken into consideration, *first*, that the bacilli may be enclosed in the

tubercle-tissue, as in miliary tubercle, which rarely produces destruction of the lungs, and consequently they may fail to appear in the sputum, and, *second*, that the examiner may fail occasionally in any case to succeed in preparing a successful preparation of stained bacilli. On the other hand, if bacilli are present, they sometimes may not be pertaining to the case, but be accidentally introduced through use of a vessel uncleansed and used by another patient, or otherwise; and, finally, it may be inferred, but it is by no means proved under rules of scientific scrutiny, that similar bacilli do not occur in the sputum of cases other than tubercular.

From our present knowledge of the occurrence of Koch's bacillus in sputum we must therefore conclude:

1st. That the presence of bacilli is a valuable *diagnostic sign* of tubercular disease of the lung.

2d. That the quantity of bacilli found does not, as a rule, indicate the degree of the disease, and hence is *not a prognostic sign*.

3d. That the absence of tubercle-bacilli is *no proof whatsoever of the absence* of tubercular disease.

4th. *The examination of air*—viz., of the *breath of patients* suffering with pulmonary tuberculosis, and of the air of sick-rooms and hospitals generally—has given some positive, although not definite, results.

C. Theodore Williams‡ “recently selected one of the ventilation-shafts at the Brompton Hospital for Consumptives in which the flues of several wards converge, and in which extraction takes place at the rate of three hundred to four hundred feet a minute. In this current he suspended glass plates smeared with glycerin for a period of five days. The plates were then washed with distilled water, the fluid mixed with a little mucilage and evaporated down to half, and the residue tested for bacilli, which were found in fair abundance.”

R. C. Smith§ “succeeded in demonstrating bacilli in the breath of consumptive patients by making them breathe through two thin sheets of gun-cotton placed in the outer compartment of an ordinary respirator. This layer of cotton is then converted into collodion, run in thin films on slides, and stained for bacilli.”

* Deutsche Med. Wochenschr., No. 11, 1883.
† London Medical Record, March 15, 1883.

‡ Quoted from the London Lancet, July 28, 1883.
§ British Medical Journal, January 20, 1883.

A. Ransome,* on examining the breath of several advanced cases of phthisis, found specimens of bacillus in two cases, while in several other cases the organism was not found, and it was not found in the aqueous vapor condensed in the waiting-room of the Manchester Consumption Hospital. The collections had been made by exposing cover-glasses smeared with fresh white of eggs or a little mucus for a certain length of time. Gibbs's method was used in staining.

Celli and Guarneiri † made similar examinations with quite different results. They were unable, after the most careful search, to find tubercle-bacilli in the air of an unventilated room in which phthisical patients had been sleeping. The expired breath of those patients was likewise found to be entirely free from bacterial contamination. Nor could the tubercle-bacilli be discovered in air which had been passed through the sputa of tuberculous patients, although in every case the expectorations were found to contain them in large numbers. (They were also unsuccessful in attempts at inoculation with fluids impregnated with this presumably vitiated atmosphere.)

Profs. Sarmoni and Marchiafava ‡ examined the breath of a number of phthisical patients for bacilli, with absolutely negative results. (They conclude that phthisis is not directly contagious, but might be indirectly so by means of dried, powdered sputum, which floats as dust in the air.)

V. Wehde § made, under direction of Bollinger, in Munich, the following experiments in relation to examination of air. Plates smeared with glycerin were exposed for forty-eight hours in closed rooms in which there were a number of advanced acute cases of phthisis. No bacilli could be found after applying the usual tests in the appropriate manner. (He further testifies that after injecting the material collected, as above stated, into the peritoneal cavity of eleven rabbits and guinea-pigs, no tuberculosis was produced.)

5. *Comparative studies of animal tuberculosis.*—Spontaneous animal tuberculosis is unquestionably identical with human tuberculosis. There are a few morphological specializations, which I mentioned in a for-

mer chapter,—*e.g.*, in tuberculosis of birds and in bovine tuberculosis or pearl-disease; but the essential, peculiar histological features are the same in all. Tubercle-bacilli appear also to be present in nearly all cases of spontaneous animal tuberculosis. I detected bacilli in a tuberculous bronchial lymph-gland from a phthisical tiger, which I had kept in alcohol for eight years, and in one from a monkey of more recent date; and several times I found bacilli in spontaneous bovine, chicken, rabbit, and guinea-pig tuberculosis. I also studied tuberculosis in the bear, lion, leopard, and in a large variety of apes (dead of typical consumption, from the Zoological Garden), with results identical with those obtained from studies in man. But this was long before the "outbreak" of the "bacillary campaign," and consequently Koch's parasite was not looked for in these latter cases.

Bollinger || found bacilli in the udder of a cow affected by pearl-disease (bovine tuberculosis).

There are no observations on record concerning the occurrence of tubercle-bacilli in the excretions and the manure of animals affected by tuberculosis (sputum is not produced by animals),—not even any reliable observation of bacilli in the milk.

Artificial or induced tuberculosis in animals will be considered in connection with the experiments farther on.

6. *The occurrence of bacilli in lesions and substances other than tubercular.*—Bacilli not distinguishable from tubercle-bacilli are met with in lupus and leprosy. The bacillus met with in lupus is unquestionably identical with the tubercle-bacillus, as is evident from the investigations of Max Schüller, Pfeiffer, ¶ Dontretpont,** and Babès and Cornil. †† Yet the dermatologists are hardly inclined to recognize lupus and tubercle as inseparable, there being already a defined tuberculous lesion (the scrofuloderma) on the dermatological list, and, further, they refuse to identify the two lesions on clinical and anatomical grounds.

The bacillus of leprosy, in specimens which I had the opportunity to examine, appears to me also perfectly identical with the small forms of tubercle-bacilli; although the lepra-bacillus may perhaps look more

* British Medical Journal, December 16, 1882.

† Quoted by the New York Record from the Gazzetta degli Ospitali, No. 56, 1883.

‡ Annali Universali di Medicina, September, 1883.

§ Prager Med. Wochenschr., January, 1884.

|| Centralblatt f. d. Med. Wiss., August 18, 1883.

¶ Deutsche Med. Wochenschr., No. 19, 1883.

** Monatsheft f. Praktische Dermatologie, No. 6, 1883.

†† Loc. cit.

sharp-pointed to the eyes of others and may fail to take the brown stain. There is nothing surprising in the fact that the same species of bacillus inhabiting soils of different character and different chemical composition, perhaps, may acquire varying micro-chemical properties and slight modification in shape. The experiments of Damsch* further suggest the identity of leprosy- and tubercle-bacilli in their effects. There is no reason to believe that leprosy is a variety of tuberculosis, yet we must either declare lupus, leprosy, and tubercle to be identical lesions, or else declare the tubercle-bacillus not to be peculiar to tuberculosis.

I observed bacilli not distinguishable by the shape and micro-chemical tests from tubercle-bacilli in the false membranes in two cases of diphtheria and in one case of scarlet fever with extensive pseudo-membranous angina. Two of these cases proved fatal; the autopsies did not reveal tuberculosis in any part of the body. The false membrane was prepared by crushing it between two cover-glasses, and was treated like sputum.

In syphilis of the lung the cheesy material and the sputum (as above stated) were found to contain tubercle-bacilli by Levinsky,† and also by Koryanyi.‡

Lichtheim§ and Craemer|| may be mentioned yet in this connection as having each found the tubercle-bacilli, or bacilli like them in every respect, in the fæces of a number of non-tuberculous patients, as well as in the tuberculous. This is, however, energetically contradicted by Gaffky, of Koch's laboratory, on the ground that he (Gaffky) failed to discover in fæces of normal persons in Berlin any bacilli which reacted to micro-chemical tests like tubercle-bacilli.

The discovery of Professor Bologh¶ that bacilli similar to tubercle-bacilli are found in the marshes around Pesth, Koch also tries to demolish by the statement that such bacilli were not detected in the mud of a Berlin city canal.

In sections of phthisical lungs-I often observed masses of bacilli in those portions which were without tubercles, but which were affected secondarily by simple acute

inflammatory changes and the air-vesicles merely stuffed with exudate undergoing rapid disintegration (coagulation necrosis); while the real tubercle-tissue contained no bacilli, or sometimes only a few in the giant cells. I think Prudden** also noted this.

Surveying now the whole question of the habitat of the bacillus tuberculosis, it becomes evident that Koch's dogma—that only that is tuberculosis, and everything is tuberculosis, where his bacillus is found—is overdrawn and cannot bear criticism. It would be much safer to reverse this proposition, and to consider only that *bacillus a tubercle-bacillus which inhabits evident tubercular lesions* or their products,—e.g., sputum, and nothing else. For we have no difficulty in diagnosing under the microscope a tubercle without the bacillus; but a dilemma arises at once if we see questionable bacilli without the tubercle, or outside of sputum.

(To be continued.)

CLINICAL ASPECTS OF CEREBRAL SYPHILIS.

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(Read before the College of Physicians of Philadelphia, February 6, 1884.)

(Continued from p. 426.)

THE most satisfactory way of approaching this subject is, however, to study the important symptoms in severalty, rather than to attempt to group them so as to make typical, recognizable varieties of the disease; and this method I shall here adopt.

Headache is the most constant and usually the earliest symptom of meningeal syphilis; but it may be absent, especially when the lesion is located in the reflexions of the meninges, which dip into the ventricles, or when the basal gumma is small and not surrounded with much inflammation. The length of time it may continue without the development of other distinct symptoms is remarkable. In one case (Book Y, p. 88, 1879), at the University Dispensary, the patient affirmed that he had had it for four years before other causes of complaint appeared. It sometimes disappears when other manifestations develop. It varies almost indefinitely in its

* Centralblatt f. d. Med. Wiss., July 21, 1883.

† Loc. cit.

‡ Loc. cit.

§ Fortschritte der Med., vol. i., 1883.

|| Sitzungsbericht der Societät in Erlangen, December 11, 1882.

¶ Wiener Med. Wochenschr., No. 51, 1882.

** Loc. cit.

type, but is, except in very rare cases at least, so far paroxysmal as to be subject to pronounced exacerbations. In most instances it is entirely paroxysmal; and a curious circumstance is, that very often these paroxysms may occur only at long intervals. Such distant paroxysms are usually very severe, and are often accompanied by dizziness, sick stomach, partial unconsciousness, or even by more marked congestive symptoms. The pain may seem to fill the whole cranium, or may be located in a cerebral region, or fixed in a very limited spot. Heubner asserts that when this headache can be localized it is generally made distinctly worse by pressure at certain points; but my own experience is hardly in accord with this. Any such soreness plainly cannot directly depend upon the cerebral lesion, but must be a reflex phenomenon, or due to a neuritis. According to my own experience, localized soreness indicates an affection of the bone or of its periosteum. In many cases, especially when the headache is persistent, there are distinct nocturnal exacerbations.

It will be seen that there is nothing absolutely characteristic in the headache of cerebral syphilis; but excessive persistency, apparent causelessness, and a tendency to nocturnal exacerbation should in any cephalalgia excite suspicion of a specific origin, a suspicion which is always to be increased by the occurrence of slight spells of giddiness, or by delirious mental wandering accompanying the paroxysms of pain. When an acute inflammatory attack supervenes upon a specific meningeal disease, it is usually ushered in by a headache of intolerable severity.

When the headache in any case is habitually very constant and severe, the disease is probably in the dura mater or periosteum; and this probability is much increased if the pain be local and augmented by firm, hard pressure upon the skull over the seat of the pain.

Disorders of Sleep.—There are two antagonistic disorders of sleep, either of which may occur in cerebral syphilis, but which have only been present in a small proportion of the cases that I have seen. Insomnia is more apt to be troublesome in the prodromic than in the later stages, and is only of significance when combined with other more characteristic symptoms. A peculiar somnolence is of much more determinate import. This may occur in

non-specific lepto-meningitis, and in states of altered brain-nutrition from senile or other degenerations of the walls of the cerebral vessels, and is therefore not pathognomonic of cerebral syphilis, yet of all the single phenomena of the latter disease it is the most characteristic. Its absence is of no import in the theory of an individual case.

As I have seen it, it occurs in two forms. In the one variety the patient sits all day long or lies in bed in a state of semistupor, indifferent to everything, but capable of being aroused, answering questions slowly, imperfectly, and without complaint, but in an instant dropping off again into his quietude. In the other variety the sufferer may still be able to work, but often falls asleep while at his tasks, and especially towards evening has an irresistible desire to slumber, which leads him to pass, it may be, half of his time in sleep. This state of partial sleep may precede that of the more continuous stupor, or may pass off when an attack of hemiplegia seems to divert the symptoms. The mental phenomena in the more severe cases of somnolency are peculiar. The patient can be aroused; indeed, in many instances he exists in a state of torpor rather than of sleep; when stirred up he thinks with extreme slowness, and may appear to have a form of aphasia; yet at intervals he may be endowed with a peculiar automatic activity, especially at night. Getting out of bed; wandering aimlessly and seemingly without knowledge of where he is, and unable to find his own bed; passing his excretions in a corner of the room, or in other similar place, not because he is unable to control his bladder and bowels, but because he believes that he is in the proper place for such act,—he seems a restless automaton rather than a man.

Apathy and indifference are the characteristics of this state, and yet the patient will sometimes show excessive irritability when aroused, and will at other periods complain bitterly of pain in his head, or will groan as though suffering severely in the midst of his stupor, at a time, too, when he is not able to recognize the seat of the pain. I have seen a man with a vacant apathetic face, almost complete aphasia, persistent heaviness and stupor, arouse himself when the stir in the ward told him that the attending physician was present, and come forward in a dazed, highly pa-

thetic manner, by signs and broken utterance begging for something to relieve his head. Heubner speaks of cases in which the irritability was such that the patient fought vigorously when aroused: this I have not seen.

This somnolent condition may last many weeks. Dr. T. Buzzard (*Clinical Lectures on Diseases of the Nervous System*, London, 1882) details the case of a man who, after a specific hemiplegia, lay silent and somnolent for a month, and yet finally recovered so completely as to win a rowing-match on the Thames.

In its excessive development, syphilitic stupor puts on the symptoms of advanced brain-softening, to which it is indeed often due. Of the two cases with fatal result of which I have notes, one at the autopsy was found to have symmetrical purulent breaking down of the anterior cerebral lobes; the other, softening of the right frontal and temporal lobes, due to the pressure of a gummatous tumor, and ending in a fatal apoplexy.

This close connection with cerebral softening explains the clinical fact that apoplectic hemorrhage is very apt to end the life in these cases of somnolent syphilis. Dr. Buzzard's case, given above, and others which might be cited prove, however, that a prolonged deep stupor in persons suffering from cerebral syphilis does not prove the existence of extensive brain-softening, and is not incompatible with subsequent complete recovery. As an element of prognosis, it is of serious but not of fatal import.

Paralysis.—When it is remembered that a syphilitic exudation may appear at almost any position in the brain, that spots of encephalic softening are a not rare result of the infection, and that syphilitic disease is a common cause of cerebral hemorrhage, it is plain that a specific palsy may be of any conceivable variety, and affect either the sensory, motor, or intellectual sphere. The mode of onset is as various as the character of the palsy. The attack may be instantaneous, sudden, or gradual. The gradual development of the syphilitic gumma would lead us, *a priori*, to expect an equally gradual development of the palsy; but experience shows that in a large proportion of the cases the palsy develops suddenly, with or without the occurrence of an apoplectic or epileptic fit. Under these circum-

stances it will be usually noted that the resulting palsy is incomplete; in rare instances it may be at its worst when the patient awakes from the apoplectic seizure, but mostly it progressively increases for a few hours and then becomes stationary. These sudden partial palsies probably result from an intense congestion around the seat of disease, or from stoppage of the circulation in the same locality; but, whatever their mechanism may be, it is important to distinguish them from palsies which are due to hemorrhage. I believe this can usually be done by noting the degree of paralysis.

A suddenly-developed, *complete* hemiplegia or other paralysis may be considered as in all probability either hemorrhagic or produced by a thrombus so large that the results will be disorganization of the brain-substance and a future no more hopeful than that of a clot. On the other hand, an *incomplete* palsy may be rationally believed to be due to pressure or other removable cause, and this belief is much strengthened by a gradual development. The bearing of these facts upon prognosis it is scarcely necessary to point out.

Although the gummata may develop at almost any point, they especially affect the base of the brain, and are prone to involve the nerves which issue from it. Morbid exudations not tubercular or syphilitic are very rare in this region. Hence a rapidly but not abruptly appearing strabismus, ptosis, dilated pupil, or any paralytic eye symptom in the adult is usually of syphilitic nature. Syphilitic facial palsy is not so frequent, whilst paralyzes of the nerve from rheumatic and other inflammation within its bony canal are very common. Paralysis of the facial may therefore be specific, but it is of no diagnostic value. Since syphilitic palsies about the head are in most instances due to pressure upon the nerve-trunks, the electrical reactions of degeneration are present in the affected muscles.

There is one peculiarity about specific palsies which has already been alluded to as frequently present,—namely, a temporary, transient, fugitive, varying character and seat. Thus, an arm may be weak to-day, strong to-morrow, and the next day feeble again, or the recovered arm may retain its power and a leg fail in its stead. These transient palsies are much more apt to involve large than small brain-territories.

The explanation of their largeness, fugitiveness, and incompleteness is that they are not directly due to clots or other structural changes, but to congestions of the brain-tissues in the neighborhood of gummatous exudations. It is easily seen why a squint will remain when the accompanying monoplegia disappears.

Motor palsies are more frequent than sensory affections in syphilis, but hemianæsthesia, localized anæsthetic tracts, indeed any form of sensory paralysis, may occur. Numbness, formications, all varieties of paræsthesia, are frequently felt in the face, body, or extremities. Violent peripheral neuralgic pains are rare, and generally when present denote neuritis. Prof. Huguenin, however, reports (*Schweiz. Corr. Blatt*, 1875) a case in which a severe trigeminal anæsthesia dolorosa had existed during life as the only cerebral symptom, and, death occurring from lung-disease, a small gumma was found on the sella turcica pressing upon the Gasserian ganglion.

The special senses are liable to suffer from the invasion of their territories by cerebral syphilis, and the resulting palsies follow courses and have clinical histories parallel to those of the motor sphere. The onset may be sudden or gradual, the result temporary or permanent. Dr. Charles Mauriac (*loc. cit.*, p. 31) reports a case in which the patient was frequently seized with sudden attacks of severe frontal pain and complete blindness, lasting from a quarter to half an hour; at other times the same patient had spells of aphasia lasting only for one or two minutes. In a case still under my care, with unmistakable signs of cerebral syphilis, the man was suddenly and unaccountably seized with complete deafness, which after some days disappeared in the course of a few hours. Like other syphilitic palsies, therefore, paralyses of special senses may come on suddenly or gradually, and may occur paroxysmally.

Among the palsies of cerebral syphilis must be ranked aphasia. An examination of recorded cases shows that it is subject to vagaries and laws similar to those connected with other specific cerebral palsies. It is usually a symptom of advanced disease, but may certainly develop as one of the first evidences of cerebral syphilis.

Coming on after an apoplectic or epileptic fit, it may be complete or incom-

plete: owing to the smallness of the centre involved and the ease with which its function is held in abeyance, a total loss of word-thought is not so decisive as to the existence of cerebral hemorrhage as is a total motor palsy. Like hemiplegia or monoplegia, specific aphasia is sometimes transitory and paroxysmal. Dr. Buzzard (*loc. cit.*, p. 81) records several such cases. Dr. Charles Mauriac (*Aphasie et Hémiplegie droite syphilitique*, Paris, 1877) details a very curious case in which a patient, after long suffering from headache, was seized by sudden loss of power in the right hand and fingers, lasting about ten minutes only, but recurring many times a day. After this had continued some time, the paroxysms became more completely paralytic and were accompanied by loss of power of finding words, the height of the crises in the palsy and aphasia being simultaneously reached. For a whole month these attacks occurred five or six times a day, without other symptoms except headache, and then the patient became persistently paralytic and aphasic, but finally recovered.

To describe the different forms of specific aphasia and their mechanism of production would be to enter upon a discussion of aphasia itself, a discussion out of place here. Suffice it to say that every conceivable form of the disorder may be induced by syphilis.

Owing to the centres of speech being situated in the cortical portion of the brain, aphasia in cerebral syphilis is very frequently associated with epilepsy. Of course, right-sided palsy and aphasia are united in syphilitic as in other disorders. If, however, the statistics given by M. Tanowsky (*L'Aphasie syphilitique*) be reliable, syphilitic aphasia is associated with left-sided hemiplegia in a most extraordinarily large proportion. Thus, in fifty-three cases collected by M. Tanowsky, eighteen times was there right-sided hemiplegia, and fourteen times left-sided hemiplegia, the other cases being not at all hemiplegic. Judging from the autopsy on a case reported in Mauriac's brochure, this concurrence of left-sided paralysis and aphasia depends partly upon the great frequency of multiple brain-lesions in syphilis, and partly upon the habitual involvement of large territories of the gray matter secondarily to diseased membrane. An important practical deduction is that

the conjoint existence of left hemiplegia and aphasia is almost diagnostic of cerebral syphilis.

Probably among the palsies may be considered the disturbances of the renal functions, which are rarely met with in cerebral syphilis, and which are probably usually dependent upon the specific exudation pressing upon the vaso-motor centres in the medulla. Fournier speaks of having notes of six cases in which polyuria, with its accompaniment, polydipsia, was present, and details a case in which the specific growth was found in the floor of the fourth ventricle. Cases have been reported in which true saccharine diabetes has been present (consult Servantié, *Des Rapports du Diabète et de la Syphilis*, Paris Thèse, 1876); and I can add to these an observation of my own. The symptoms, which occurred in a man of middle age with a distinct specific history, were headache, nearly complete hemiplegia, and mental failure, associated with the passage of comparatively small quantities of a urine so highly saccharine as to be really a syrup. Under the influence of the iodide of potassium, the sugar in a few weeks disappeared from the urine.

Epilepsy.—Epileptic attacks are a very common symptom of meningeal syphilis, and are of great diagnostic value. The occurrence in an adult of an epileptic attack, or of an apoplectic fit, or of a hemiplegia after a history of intense and protracted headache, should always excite grave suspicion.

Before I read Prof. Fournier's work on Nervous Syphilis, I taught that an epilepsy appearing after thirty years of age was very rarely, if ever, essential epilepsy, and, unless alcoholism, uræmic poison, or other adequate cause could be found, was in nine cases out of ten specific; and I therefore quote with satisfaction Prof. Fournier's words: "L'épilepsie vraie ne fait jamais son premier début à l'âge adulte, à l'âge mûr. Si un homme adulte, au-dessus de 30, 35, à 40 ans, vient à être pris pour la première fois d'une crise épileptique, et cela dans le cours d'une bonne santé apparente, il y a, je vous répète, huit ou neuf chances sur dix pour que cette épilepsie soit d'origine syphilitique."

Syphilitic epilepsy may occur either in the form of *petit mal* or of the *haut mal*, and in either case may take on the exact characters and sequence of phenomena

which belong to the so-called idiopathic or essential epilepsy. The momentary loss of consciousness of *petit mal* will usually, however, be found to be associated with attacks in which, although voluntary power is suspended, memory recalls what has happened during the paroxysm,—attacks, therefore, which simulate those of hysteria and may lead to an error of diagnosis.

Even in the fully-developed type of the convulsions the aura is only rarely present. Its absence is not, however, of diagnostic value, because it is frequently not present in true essential epilepsy, and it may be pronounced in specific disease. It is said that when in an individual case the aura has once appeared, the same type or form of approach of the convulsion is thereafter rigidly adhered to. The aura is sometimes bizarre: a severe pain in the foot, a localized cramp, a peculiar sensation, indescribable and unreal in its feeling, may be the first warning of the attack.

In many, perhaps most, cases of specific convulsions, instead of a paroxysm of essential epilepsy being closely simulated, the movements are in the onset, or, more rarely, throughout the paroxysm, unilateral; indeed, they may be confined to one extremity. This restriction of movement has been held to be almost characteristic of syphilitic epilepsy; but it is not so. Whatever diagnostic significance such restriction of the convulsion has is simply to indicate that the fit is due to a cortical organic lesion of some kind. Tumors, sclerosis, and other organic lesions of the brain-cortex are as prone to cause unilateral or monoplegic epilepsy when they are not specific as when they are due to syphilis.

Sometimes an epilepsy dependent upon a specific lesion implicating the brain-cortex may be replaced by a spasm which is more or less local and is not attended with any loss of consciousness. Thus, in a case now convalescent in the University Hospital, a man, aged about 35, offered a history of repeated epileptic convulsions, but at the time of his entrance into the hospital, instead of epileptic attacks, there was a painless tic. The spasms, which were clonic and occurred very many times a day,—sometimes every five minutes,—were very violent and mostly confined to the left facial nerve distribution. The trigeminus was never affected, but in the

severer paroxysms the left hypoglossal and spinal accessory nerves were profoundly implicated in all their branches. Once fatal asphyxia from recurrent laryngeal spasm of the glottis was apparently averted only by the free inhalation of the nitrite of amyl. The sole other symptom was headache; but the specific history was clear and the effect of anti-syphilitic remedies rapid and pronounced.

Psychical Symptoms.—As already stated, apathy, somnolence, loss of memory, and general mental failure are the most frequent and characteristic mental symptoms of meningeal syphilis; but, as will be shown in the next chapter, syphilis is able to produce almost any form of insanity, and therefore mania, melancholia, erotic mania, delirium of grandeur, etc., may develop along with the ordinary manifestation of cerebral syphilis, or may come on during an attack which has hitherto produced only the usual symptoms. Without attempting any exhaustive citation of cases, the following may be alluded to:

Dr. A. Erlenmeyer reports (*Die luetischen Psychosen*) a case in which an attack of violent headache and vomiting was followed by paralysis of the right arm and paresis of the left leg, with some mental depression; a little later the patient suddenly became very cheerful, and shortly afterwards manifested very distinctly delirium of grandeur, with failure of memory. Dr. Batty Tuke reports (*Journal of Mental Science*, January, 1874, p. 560) a case in which, with aphasia, muscular wasting, strabismus, and various palsies, there were delusions and hallucinations.

In the same journal, April, 1869, Dr. S. D. Williams reports a case in which there were paroxysmal violent attacks of frontal headache. The woman was very dirty in her habits, only ate when fed, and existed in a state of hypochondriacal melancholy.

M. Leidesdorf details a case with headache, partial hemiplegia, great psychical disturbance, irritability, change of character, marked delirium of grandeur, epileptic attacks, and finally dementia, eventually cured with iodide of potassium. (*Medizin. Jahrbücher*, xx., 1864, p. 114.) Several cases illustrating different forms of insanity are reported by Dr. N. Manssrow. (*Die Tertiäre Syphilis*, Wien, 1877.)

That the attacks of syphilitic insanity, like the palsies of syphilis, may at times be temporary and fugitive, is shown by a

curious case reported by Dr. H. Hayes Newington (*Journal of Mental Science*, xix. 555), in which, along with headache, failure of memory, and ptosis in a syphilitic person, there was a brief paroxysm of noisy insanity.

DISEASES OF BRAIN-SUBSTANCE.

The psychical symptoms which are produced by syphilis are often very pronounced in cases in which the paralysis, headache, epilepsy, and other palpable manifestations show the presence of gross brain-lesions. In the study of syphilitic disease of the brain-membranes, sufficient has been said in regard to these psychical disturbances; but the problem which now offers itself for solution is as to the existence or non-existence of syphilitic insanity,—*i.e.*, of an insanity produced by specific contagion without the obvious presence of gummatous disease of the brain-membranes. Very few alienists recognize the existence of a distinct affection entitled to be called syphilitic insanity, and there are some that deny that insanity is ever directly caused by syphilis. It is certain that insanity often occurs in the syphilitic, but syphilis is abundantly joined with alcoholism, poverty, mental distress, physical ruin, and various depressing emotions and conditions which are well known to be active exciting causes of mental disorder. It may well be that syphilis is in such way an indirect cause of an insanity which under the circumstances could not be properly styled syphilitic.

If there be disease of the brain-cortex produced directly by syphilis, of course such disease must give rise to mental disorders, and, if the lesion be situated in such a way as to affect the psychic and avoid the motor regions of the brain, it will produce mental disorder without paralysis,—*i.e.*, a true insanity: again, if such brain-disease be wide-spread, involving the whole cortex, it will cause a progressive mental disorder, accompanied by a gradual loss of power in all parts of the body and ending in dementia with general paralysis; or, in other words, it will produce an affection more or less closely resembling the so-called general paralysis of the insane, or dementia paralytica.

A man having syphilis may also have a disease which is not directly due to the syphilis, and when a syphilitic person has

any disorder there is only one positive way of determining how far said disorder is specific,—namely, by studying its amenability to anti-syphilitic treatment. In approaching the question whether a lesion found after death is specific or not, of course such a therapeutic test as that just given is inapplicable. We can only study as to the coexistence of the lesion in consideration with other lesions known to be specific. Such coexistence of course does not absolutely prove the specific nature of a nutritive change, but renders such nature exceedingly probable.

What has just been said foreshadows the method in which the subject in hand is to be here examined, and the present chapter naturally divides itself into two sections: the first considering the coexistence of anatomical alterations occurring in the cerebral substance with syphilitic affections of the brain-membranes or blood-vessels, the second being a clinical study of syphilitic insanity.

In looking over literature I have found the following cases in which a cerebral sclerotic affection coincided with a gummatous disease of the membrane. Gross and Lancereaux (*Affect. Nerv. Syphilis*, 1861, p. 245) report a case having a clear syphilitic history, in which the dura mater was adherent to the skull. The pia mater was not adherent. Beneath, upon the vault of the brain, was a gelatinous exudation. The upper cerebral substance was indurated, and pronounced by M. Robin after microscopic examination to be sclerosed. At the base of the brain were very atheromatous arteries and spots of marked softening.

Dr. J. J. Brown (*Journal of Mental Science*, July, 1875, p. 271) reports a case in which the symptoms were melancholia, excessive irritability, violent outbursts of temper, very positive delusions, disordered gait, ending in dementia. At the autopsy, which was very exhaustive, extensive syphilitic disease of the vessels of the brain and spinal cord was found. The pia mater was not adherent to the brain. The convolutions, particularly of the frontal and parietal lobes, were atrophied, with very wide sulci, filled with bloody serum. The neuroglia of these convolutions was much increased, and “appeared to be more molecular than normal; the cells were degenerated and in many places had disappeared, their places being only occupied by some granules.” These

changes were most marked in the frontal convolutions.

H. Schule reports (*Allgem. Zeitschrift f. Psychiatrie*, xxviii., 1871-72) a very carefully and meritoriously studied case. The symptoms during life exactly simulated those of dementia paralytica. The affection commenced with an entire change in the disposition of the patient: from being taciturn, quiet, and very parsimonious, he became very excited, restless, and desiring continuously to buy in the shops. Then failure of memory, marked sense of well-being, carelessness and indifference for the future, developed consentaneously with failure of the power of walking, trembling of the hands, inequality of the pupils, and hesitating speech. There was next a period of melancholy, which was in time followed by continuous failure of mental and motor powers, and very pronounced delirium of grandeur, ending in complete dementia. Death finally occurred from universal palsy, with progressive increase of the motor symptoms. At the autopsy, characteristic syphilitic lesions were found in the skull, dura mater, larynx, liver, intestines, and testicles. The brain presented the macroscopic and microscopic characters of sclerosis and atrophy; the neuroglia was much increased, full of numerous nuclei, the ganglion-cells destroyed. The vessels were very much diseased, some reduced to cords; their walls were greatly thickened, and full of long, spindle-shaped cells, sometimes also containing fatty granules.

Dr. C. E. Stedman and Robert T. Edes report (*Amer. Journ. Med. Sci.*, lxi., 433) a case in which the symptoms were failure of health, ptosis, trigeminal palsy with pain (anæsthesia dolorosa), finally mental failure with gradual loss of power of motion and sensation. At the autopsy the following conditions were noted: apex of the temporal lobe adherent to dura mater and softened; exuded lymph in neighborhood of optic chiasm; sclerosis of right Gasserian ganglion, as shown in a marked increase in the neuroglia; degeneration in the basal arteries of the brain.

These cases are sufficient to demonstrate that sclerosis of the brain-substance may not only coexist with a brain-lesion which is certainly specific in its character, but may also present the appearance of having developed *pari passu* with that lesion, and from the same cause.

Cases of Cerebral Syphilis, with Results of Treatment.

No.	Reporter and Journal.	Symptoms.	Results. Remarks.
1	Louis Streisland..... Die Lues als Ursache der Dementia. Inaug. Diss., Berlin, 1878.	Epilepsy, delirium of exaltation, alteration of speech, headache, failure of memory.	Rapid cure with mercury.
2	Ibid.....	Delusions, delirium, general mania, great muscular weakness.	Cure with mercury.
3	Dr. Müller, of Leutkirch..... Journ. of Mental Dis., 1873-74, 56r.	Symptoms resembling general paralysis, and diagnosis of such made until a sternal node was discovered.	Cure by iodide of potassium.
4	Fr. Esmarch and W. Jersen..... Allgem. Zeitschrift f. Psychiatrie.	Sleeplessness, great excitement, restlessness, great activity, incoherence and violence.	Cure by mercury.
5	M. Leidesdorf..... Medizin. Jahrbücher, xx., 1864, 1.	Complete mania, played with his excrement, and entirely irrational.	Complete cure by iodide of potassium.
6	Dr. Beauregard..... Gaz. Hebdom. de Sci. Méd. de Bordeaux, 1880, p. 64.	Symptoms resembling those of general paralysis.	Cure by iodide of potassium.
7	M. Rendu..... Ibid.	Loss of memory, headache, irregularity of pupils, ambitious delirium, periods of excitement, others of depression, embarrassment of speech, access of furious delirium ending in stupor.	Mercurial treatment, cure.
8	Ibid.....	Hypochondria, irregularity of pupils, headache, failure of memory, melancholy, stupor.	Mercurial treatment, cure.
9	Dr. Albrecht Erlenmeyer..... Die luetischen Psychosen, Neuwied, 1877.	Melancholia with hypochondriasis, sleeplessness, fear of men, and belief that they were all leagued against him.	Iodide of potassium, cure.
10	Ibid.....	Religious melancholia, with two attempts at suicide, ending in mania.	Iodide of potassium, cure.
11	Ibid.....	At times very violent, yelling, shrieking, destroying everything she could get hands on, at times erotomania; no distinct history of infection, but her habits known to be bad, and had bone ozæna and other physical syphilitic signs.	Iodide of potassium, cure.
12	Ibid.....	Epileptic attack followed by a long soporose condition, ending in mental confusion, he not knowing his nearest friends, etc., almost dementia.	Cured by mercurial inunction.
13	Ibid.....	Great fear of gendarmes, etc., mania, with hallucinations, loud crying, yelling, etc., then convulsion, followed by great difficulty of speech.	Cured by mercurial inunctions with iodide internally; subsequently return of convulsions, followed by hemiplegia and death.
14	Ibid.....	Great unnatural vivacity and loquacity, wanted to buy everything, bragged of enormous gains at play, etc.; some trouble of speech.	Iodide of potassium, cure. Attended to business and seems as well as before. Relapsed. (See Symptoms.)
	Ibid..... Relapse of Case 14	Fifteen months after discharge from asylum relapse; symptoms developing very rapidly, delirium of grandeur of the most aggravated type, with marked progressive dementia, failure of power of speech, and finally of locomotion.	Failure of various anti-specific treatment.
15	Dr. A. Erlenmeyer..... Die luetischen, etc.	Failure of mental powers, inequality of pupils, trembling of lip when speaking, uncertainty of gait, almost entire loss of memory, once temporary ptosis and strabismus.	Iodide of potassium in ascending doses failed. Recovery under mercurial inunctions.
16	Ibid.....	Failure of mental powers, pronounced delirium of grandeur, hallucinations of hearing, failure of memory, strabismus and ptosis coming on late.	Iodide of potassium, corrosive sublimate injections. Cure.
17	Ibid.....	Failure of memory and mental powers, slight ideas of grandeur, disturbance of sensibility and motility, aphasia coming on late.	Cure with use of iodide and mercurial inunctions.
18	Ibid.....	Melancholy, great excitability, ideas of grandeur, after a long time sudden ptosis and strabismus.	Iodide of potassium failed; mercurial course improved; joint use cured patient.
19	Ibid.....	Various cerebral nerve palsies, great relief from use of mercurial inunctions, then development of great excitement, delirium of grandeur, failure of memory and mental powers, and finally death from apoplexy. No autopsy.	
20	Dr. J. B. Chapin..... Amer. Journ. Insanity, vol. xv. p. 249.	Melancholia with attempted suicide, epilepsy, headache, somnolent spells.	Iodide of potassium, cure.
21	Ibid.....	Acute mania, noisy, very destructive; syphilitic disease of tibia.	Iodide of potassium, cure.
22	Dr. Snell.....	Maniacal excitement.	Cured by specific treatment.
23	William Smith..... Brit. Med. Journ., July, 1868, p. 30.	Apathetic melancholy, indelicate, speaking only in monosyllables, and much of the time not at all, sullen and menacing.	Rapidly cured by conjoint use of iodide and mercurial. The symptoms first developed three months after chancre.

It has already been stated in this memoir that cerebral meningeal syphilis may coexist with various forms of insanity, and cases have been cited in proof thereof. It is, of course, very probable that in some of such cases there has been that double lesion of membrane and gray brain-matter which has just been demonstrated by report of autopsies; further, if we find that there is a syphilitic insanity, which exists without evidences of meningeal syphilis and is capable of being cured by anti-specific treatment, such insanity must be considered as representing the disease of the gray matter of the brain. Medical literature is so gigantic that it is impossible to exhaust it, but the list of cases on the preceding page is amply sufficient to prove the point at issue,—namely, that there is a syphilitic insanity, which exists without obvious meningeal disease and is capable of being cured by anti-syphilitic treatment.

A study of the brief analyses of symptoms just given shows that syphilitic disease of the brain may cause any form of mania, but that the symptoms, however various they may be at first, end almost always in dementia, unless relieved.

Of all the forms of insanity, general paralysis is most closely and frequently simulated by specific brain disease. The exact relation of the diathesis to true, incurable, general paralysis it is very difficult to determine. It seems well established that among persons suffering from this disorder the proportion of syphilitics is not only much larger than normal, but also much larger than in other forms of insanity. Thus, Dr. E. Mendel (*Progres. Paral. der Irren*, Berlin, 1880) found that in one hundred and forty-six cases of general paralysis one hundred and nine, or seventy-five per cent., had a distinct history of syphilis, whilst in one hundred and one cases of various other forms of primary insanity only eighteen per cent. had specific antecedents.

Various opinions might be cited as to the nature of this relation between the two disorders, but for want of space the curious reader is referred to the work just quoted and to the thesis of C. Chauvet (*Influence de la Syphilis sur les Maladies du Système nerveux*, Paris, 1880) for an epitome of the most important recorded opinions.

Those who suffer from syphilis are exposed in much greater proportion than are

other persons to the ill effects of intemperance, sexual excesses, poverty, mental agony, and other well-established causes of general paralysis. It may be that in this is sufficient explanation of the frequency of general paralysis in syphilitics, but I incline to the belief that syphilis has some direct effect in producing the disease. However this may be, I think we must recognize as established the opinion of Voisin (*Paralysie générale des Aliénés*, 1879) that there is a syphilitic peri-encephalitis which presents symptoms closely resembling those of general paralysis. Such cases are examples of the pseudo-paralysie générale of Fournier (*La Syphilis du Cerveau*, Paris, 1879).

The question as to the diagnosis of these cases from the true incurable paresis is of course very important, and has been considered at great length by Voisin (*loc. cit.*), Fournier (*loc. cit.*), and Mickle (*Brit. and For. Med.-Chir. Rev.*, 1877.)

The points which have been relied upon as diagnostic of syphilitic pseudo-general paralysis are:

The occurrence of headache, worse at night and present among the prodromes.

An early persistent insomnia or somnolence; early epileptiform attacks.

The exaltation being less marked, less persistent, and perhaps less associated with general maniacal restlessness and excitement.

The articulation being paralytic rather than paretic.

The absence of tremulousness, especially of the upper lip (Fournier).

The effect of anti-syphilitic remedies.

When the conditions in any case correspond with the characters just paraphrased, or when any of the distinguishing characteristics of brain syphilis as previously given in this memoir are present, the probability is that the disorder is specific and remediable. But the absence of these marks of specific disease is not proof that the patient is not suffering from syphilis. Headache may be absent in cerebral syphilis, as also may insomnia and somnolence. Epileptiform attacks are not always present in the pseudo-paralysis, and may be present in the genuine affection; a review of the cases previously tabulated shows that in several of them the megalomania was most pronounced; and a case with very pronounced delirium of grandeur, in which

the autopsy revealed unquestionably specific brain-lesions, may be found in Chauvet's Thesis, p. 31.

I have myself seen symptoms of general paralysis occurring in persons with a specific history in which, of these so-called diagnostic appearances, the therapeutic test was the only one that revealed the true nature of the disorder. In these persons a primary immediate diagnosis was simply impossible.

Case 14 of our table is exceedingly interesting, because it seems to represent as successively occurring in one individual both pseudo and true general paralysis. The symptoms of general paralysis in a syphilitic subject disappeared under the use of mercury, to return some months afterwards with increased violence, and with a new obstinacy that resisted with complete success anti-syphilitic treatment. Such a case is some evidence that syphilis has the power to produce true general paralysis.

In conclusion, I may state that it must be considered as at present proved that syphilis may produce a *disorder whose symptoms and lesions do not differ from those of general paralysis; that true general paralysis is very frequent in the syphilitic; that the only perceptible difference is one of curability; that the curable sclerosis may change into or be followed by the incurable form of the disease.* Whether, under these circumstances, it is philosophic to consider the so-called pseudo-general paralysis and general paralysis as essentially distinct affections each physician can well judge for himself.

RECENT PROGRESS IN THERAPEUTICS AND MATERIA MEDICA.

COCA.

UNDER the generic title of Erythroxy-lon, the last edition of the United States Pharmacopœia has officially recognized the Erythroxy-lon coca, which is known to have been used for ages by the natives of Peru and Bolivia as a stimulant, and especially to enable them to undergo protracted muscular exertion. The attention of the profession was called by Weddell in 1853 to its usefulness as an accessory article of food, as a substitute for tea and coffee, since it produces, like them, effects of a gently stimulating character without possessing nourishing qualities of its own. A number of experimenters and

clinical observers have confirmed this opinion and recommended its use in conditions of lowered vitality or extreme fatigue. It is probable that it also exerts some effect upon the kidneys, resulting in an increased flow of urine.

Dr. H. D. Hicks believes that the properties of this drug deserve to be better known to the profession. In a paper (*New York Medical Journal*, February 23) containing clinical records of three cases, its remarkable effects in relieving the sense of fatigue after extreme muscular exertion, and in sustaining the physical powers under unusual demands, and in weak heart, are well demonstrated. Dr. Hicks uses the remedy in his practice in order to prevent and relieve fatigue; to relieve pains in the back accompanied by the discharge of dark-colored urine; in dyspnoea due to weakness of muscles of respiration; for palpitation of heart due to dilatation or weakness of the heart-muscle without valvular lesions; mental exhaustion and low spirits; depression of nervous system following sexual excesses, sick-headache, etc. Finally, he claims that it destroys the craving for alcohol, and that its habitual use as a part of the daily diet conduces to mental clearness and activity, freedom from fatigue, and sound sleep. These good effects were obtained from doses of half a drachm of the fluid extract several times daily.

ACTION OF THE OPIUM-ALKALOIDS.

According to some recent researches by Von Schroeder, conducted in Professor Schmiedeberg's laboratory in Strasburg, all the opium-alkaloids hitherto examined resemble opium in acting on the same part of the body,—viz., the central nervous system. This conclusion holds good only for mammals, and must be qualified in regard to the frog, for in it narcotine, codeine, papaverine, and thebaine have also a paralyzing action on the motor ganglia of the heart. These alkaloids agree with morphine not only in the organ they affect, but in the nature of their action. The symptoms may be divided into two stages: first, narcosis due to a paralytic action on the brain, followed by, second, tetanus due to increased irritability of the spinal cord. This agreement allows these alkaloids to be united with morphine into one group. Notwithstanding this qualitative agreement between the

action of these alkaloids on the one hand and that of morphine on the other, there are considerable quantitative differences in the development and persistence of the narcotic and tetanic stages. The narcosis these alkaloids produce, unlike that of morphine, is not very deep, and quickly passes away; in the case of thebaine it occurs in the frog, as well as in mammals. The rapid development of the tetanic stage characterizes the action of this alkaloid. There is not, as in the case of morphine, a progressive paralysis gradually destroying the functions of the different parts of the brain; the action quickly extends over the whole brain, and remains slight while symptoms of irritation have already begun. This fact renders it advisable to break up the group of opium-alkaloids into two sub-groups, the first of which may be called the morphine group, characterized by the prominence of the narcotic stage, while in the other, which may be called the codeine group, the tetanic stage is more prominent, and the narcosis less so. The members of these groups may be arranged as follows, so that each subsequent member has a weaker narcotic, and in the codeine group has, at the same time, a stronger irritant action: in the morphine group oxydimorphine; in the codeine group papaverine, codeine, narcotine, thebaine. The codeine group contains also hydrocotarnine, laudanoline, and cryptopine; but at present we know too little about them to assign a place in the group to them with certainty. The same may be said of codethyline. The codeine group becomes closely allied by its last members with the strychnine group. The members of the codeine group should not be used therapeutically for their narcotic action. In the codeines produced from morphine by the addition of alcohol radicals such as codethyline, $C_{17}H_{18}NO_2(OC_2H_5)$, obtained from morphine by the introduction of ethyl, the narcotic action is diminished, whilst the convulsive action is increased in proportion to the number of atoms of hydrogen substituted by alcoholic radicals. In the alkaloids produced from morphine by oxidation (oxydimorphine and oxymorphine), their narcotic action is diminished, without the convulsant action being increased; narceine has no apparent physiological action.*

EFFECTS OF ARSENIC, LEAD, AND MERCURY ON THE SPINAL CORD.

Dr. Podow found that in acute poisoning with arsenic, lead, and mercury, marked alterations occur in the spinal cord having the character of acute central myelitis. When the poisoning is comparatively slow, these changes are not limited to the gray substance alone, but affect the white substance also, and present the characters of diffuse myelitis. The peripheral nervous system is completely unaltered in rapid poisoning by these substances. The clinical nervous symptoms observed in rapid poisoning—convulsions, paralysis, pain, and anæsthesia—are explained by the alterations just described; but none of these symptoms can be explained by any peripheral nervous affection.†

CORROSIVE SUBLIMATE IN THE TREATMENT OF DIPHTHERIA.

In the *Therapeutic Gazette*, Dr. F. C. Herr publishes a communication strongly advocating the use of the corrosive chloride of mercury in the treatment of diphtheria. In an epidemic at Harrisburg it was administered to infants in doses of one-twelfth of a grain—every two hours for the first four doses, the interval then being increased to four hours—with excellent results. In one case two grains were given in the aggregate during the course of the treatment without bad effects. The original states that *ten* grains were given; but Dr. Herr informed us that this was a misprint, and that the amount given was that which we have just stated.

A NEW USE FOR SANTONIN.

A case under the care of Dr. N. Anderson (*Lancet*, November 10), suffering with lumbricoid worms, reported that, as the result of his treatment, he had been relieved of his worms, and also that a long-standing gleet had ceased. The reporter thereupon recommends santonin for gleet, five grains rubbed up with an equal quantity of sugar of milk, to be taken twice a day, in milk. It is possible, in the case reported, that the effect of santonin upon the gleet was due to a secondary, and not to a direct or primary, action; however, there need be no difficulty about finding suitable subjects to try it upon. *Fiat experimentum in corpore vile.*

F. W.

* Archiv f. Exp. Path. und Pharm., p. 96, vol. xvii., and Practitioner.

† Virchow's Archiv, and Practitioner.

EXCISION OF A PORTION OF THE POPLITEAL NERVE FOR GUNSHOT WOUND, WITH NERVE-SUTURE.

BY THOMAS G. MORTON, M.D.,

One of the Attending Surgeons to the Pennsylvania Hospital;
Fellow of the Academy of Surgery, etc.

M. C., aged 23, referred to me by Dr. B. C. Gulden, of Minersville, on the 12th of November, 1880, was admitted into my wards at the Pennsylvania Hospital on account of partial palsy of the limb and intense pain, resulting from a pistol-ball wound of the thigh and popliteal region.

The accident occurred on the 15th of September; the ball, which was one-thirty-second of an inch in diameter, entered the right thigh, striking the edge of the biceps tendon about four inches above the condyles; it passed underneath and across the popliteal region to the inner side, and lodged immediately under the skin, close to the head of the tibia. There was no hemorrhage, and the wound closed without suppuration. Immediately after the injury there was more or less palsy of the limb, with a marked tingling sensation, which soon changed in character to that of a burning pain, extending from the place of injury to the extremity of the limb, but especially severe upon the dorsum of the foot and ankle; shooting pain now and then extended to the hip; any manipulation of the skin or movement of the limb caused suffering of the most acute character. The atrophy of the limb was not marked, but the injured limb showed a difference of rather more than half an inch as compared with the left in calf-measurement. The surface-temperature of the injured limb at the knee was 88° F., or 4° lower than that of the other limb, while the temperature of the skin of the foot of the injured limb was 15° higher than that of the opposite side. Treatment prior to and after admission had not given the slightest relief, and the only measure of comfort was obtained by constantly sponging the limb, or having it completely immersed in water. The use of morphia by hypodermic injections, even in large doses, produced but little alleviation of the suffering.

From the course of the ball it seemed probable that the external popliteal nerve was either wounded or divided. The case seemed a fair one for an exploration with a view to an excision of the injured por-

tion of the nerve. On November 20, I cut down upon the right biceps tendon, expecting to find the external popliteal nerve in its usual place, but, after a fruitless search, opened the popliteal space by another incision, and then found the external and internal branches had continued on together into the popliteal space. On passing my finger along the course of the combined trunk, I discovered an indurated mass surrounding the nerves, evidently the result of the passage of the ball.

On elevating and examining the nerve-trunks, I found that the external popliteal had been completely severed, and that the enlargement was principally in the injured internal trunk, through which the ball had evidently passed. I then excised an inch of the nerve, removing all the injured portion. After flexing the leg, the ends of the sectioned nerves were brought into close approximation with animal carbolized ligature, and the wounds were united with silver sutures. No suppuration ensued, and the wounds united at once.

From the time of the operation the patient was free of all pain, and the result was in every respect most satisfactory. The limb was kept flexed and at rest for five weeks, in order more reasonably to assure complete nerve-union. Gradual extension was then made without causing any pain or inconvenience. On the 8th of March, 1881, the patient was discharged cured.

Dr. Morris Longstreth, the hospital pathologist, wrote me as follows concerning the portion removed:

"The specimen shows about one inch of the length of the nerve. The sheath is much thickened, especially at the central part of the specimen, and the thickening is found to involve not only the peripheral parts of the sheath, but also the septum separating the two divisions or branches of the nerve-trunk. It is found, on examining the proximal end of the excised portion, that both divisions—the internal and external popliteal branches—are present in the mass, and that they present normal conditions as to their size; but on examining the distal end of the specimen it is seen that the external division or branch is considerably smaller at its point of exit from the mass than at the upper or entrance point. It is impossible to say whether this change of size is due to cicatricial contraction of new

tissue deposited as a result of the wound or to actual destruction of a portion of the nerve by the ball itself. It is quite evident that the nerve had been divided by the ball and reunion taken place, and that the specimen comes from the site of the bullet-track."

Dr. Gulden wrote from Minersville, under date of August 4, 1883, that he had seen M. C. within a few days, and that he would send him to Philadelphia.

On October 20, 1883, M. C. was again admitted into the hospital. The limb was found to be well nourished; the calf measurement showed a difference of an inch and a quarter as compared with the sound limb; a small ulcer existed on the sole of the foot and one upon the great toe. About nine months after leaving the hospital he had gone into the mines and worked for eight months, during which time he thought he contracted frost-bite, and it was at this time the ulcers formed. Upon re-admission, he was able to flex and extend the limb, but had but very slight power over the ankle, and none of the toes; the skin of the entire limb was sensitive, but sensation was rather diminished on the sole of the foot. With his brace he could walk any distance. Since the operation he had never had any pain in the limb, and the only inconvenience results from muscular feebleness.

PECULIAR NERVOUS MANIFESTATIONS IN A CASE OF DEATH FROM RAPID HEMORRHAGE.

BY LAMBERT OTT, M.D.,

Assistant in the Department for Diseases of the Nervous System in the Post-Graduate Course of Jefferson Medical College.

MRS. M., a middle-aged woman, in the eighth month of pregnancy, after lifting heavy articles in her duties about the house, was taken with accidental uterine hemorrhage. I saw her late in the day, after considerable blood had been lost and its serious effects had been partially produced. The child was rapidly delivered, assisted greatly by the bearing-down efforts of the patient, and immediately afterwards an enormous clot and much blood were expelled. The uterus contracted fairly, and there was no further hemorrhage. Immediately after the delivery she felt well, pulse being 90. I began to wonder how a woman could

possibly live after such an excessive loss of blood. Barely had I passed the thought when I found her pulse running up to 140. She said, in reply to my questions, that she still felt well. The pulse had thus increased fully one minute, when rapid breathing set in, and then followed the most terrible array of symptoms it has ever been my misfortune to witness. Spells of darkness came before the eyes; intense headache, giddiness; vomiting, even of a teaspoonful of water; great pallor, lividity of the lips, and coldness of the extremities; beads of perspiration on the forehead; a painful and frightful consciousness of impending death, accompanied by vigorous muscular efforts, tossing from one side of the bed to the other, shrieking for help; breathing so labored and rapid, or sometimes prolonged and stertorous, as to be heard quite a distance; a desire to be raised higher, then still higher, clinging to anything near that afforded means for a grasp; and lastly she said, "All is getting dark. Raise me higher—higher! Give me more air!" With this she fell back unconscious, and died in a few minutes.

A point to be noted in this case is that there was a disturbance of the pulse some time before there was any abnormal sensation conscious to the patient. All the usual remedies were tried, such as lowering the head, elevating the foot of the bed, injecting subcutaneously ammonia, brandy, etc., but she was beyond control. She showed an inordinate strength in her efforts to overcome any forced attempt to retain her recumbent. Transfusion of blood might have saved life, but so much time had been lost that it was considered impracticable. The nervous system was in a peculiarly excitable condition: reasoning, assurance, and everything else were not strong enough to overpower the mental and physical excitement which seemed to have taken possession of this woman. Rapid death by hemorrhage is one where consciousness is preserved to the end, although the subject is painfully impressed with a sense of impending suffocation and death.

1531 NORTH SEVENTEENTH STREET, PHILADELPHIA.

Acting Assistant-Surgeon W. Thornton Parker has been ordered to Fort Leavenworth, to report for duty in the Department of Missouri.

TRANSLATIONS.

THE THERAPEUTIC APPLICATION OF NITROUS OXIDE GAS.—From a series of experiments made in Prof. Botkin's laboratory in St. Petersburg, Dr. S. Klikowitsch draws the following conclusions:

1. Nitrous oxide gas is incapable of supporting respiration in animals and plants, and, like other indifferent gases, leads to death from asphyxia. The asphyxia produced by this gas, however, presents points of contrast to the asphyxia produced by other means.

2. Nitrous oxide gas produces no chemical or morphological changes in the blood of animals, but is dissolved in it and again eliminated, according to physical laws, without apparently being broken up into nitrogen and oxygen.

3. Anæsthesia with laughing-gas is so closely associated with insufficient oxidation of the blood that it cannot be regarded as absolutely without danger, especially in diseases of the heart, lungs, or blood-vessels.

4. The association of laughing-gas with twenty per cent. of oxygen completely removes the possibility of asphyxia and produces a number of results capable of therapeutic application.

5. Under the influence of the mixture of laughing-gas and twenty per cent. oxygen, in the majority of healthy subjects, the heart's pulsations are increased, the pulse-wave diminished, and the respiratory movements decreased in number and increased in depth; these effects pass off in from three to five minutes.

6. In six cases of weak heart-action, the above gaseous mixture produced no unfavorable results; on the other hand, the pulse was decreased in frequency and increased in strength. These effects lasted from one to two hours.

7. In cases of disturbed respiratory innervation the mixture of laughing-gas and oxygen regulated the respiratory rhythm and rapidly removed the subjective and objective signs of deficient oxidation of the blood.

8. This gaseous mixture acts as a transient anæsthetic, and in angina pectoris causes a rapid removal of suffering.

9. It is to be preferred to chloroform as an anæsthetic in labor.

10. Vomiting and cough of reflex origin are arrested by a few inhalations of this

mixture of gases. — *Virchow's Archiv*, xliv. 2. s.

COMBINED CÆSOPHAGOTOMY.—Instead of treating imperforable, cicatricial strictures of the cæso-phagus, as recently recommended, by the establishment of a gastric fistule, Gussenbauer has in two cases attempted radical cure by "combined" cæso-phagotomy. By this is understood the opening of the cæso-phagus at the point of selection in the neck (Guattani), by which access to the stricture and its division by a small herniotome moving on a hollow sound are possible. The incision of the cicatricial tissues is an easy operation with such an instrument, is not followed by inflammatory results or bleeding, and the constriction can be completely removed,—a result which is not possible by simple dilatation: dilatation must, however, be constantly practised as an after-treatment, as the only means by which a return of the stricture can be prevented. On the other hand, cæso-phageal strictures may be similarly treated through a gastric fistule, though in such cases the stricture must be limited to the cardiac orifice of the stomach. Even in such cases, however, the stricture could be at least as readily reached through an opening in the cæso-phagus. The clinical histories of both cases operated on by Gussenbauer are reported in the *Zeitschrift für Heilkunde*, iv. 5, 33.—*Centralb. f. d. Med. Wissen.*, January 19, 1884. s.

CONSTITUENTS OF PODOPHYLLIN.—Podrýsatzki has found that the alcoholic extract of *podophyllum peltatum* (commonly called podophyllin) contains an amorphous resinoid substance, which has been named *podophyllotoxine*, but which is really a compound of picropodophyllin and picropodophyllic acid. The emetic and purgative effects of the drug are said to be due exclusively to the presence of the picropodophyllin.—*Répert. de Pharmacie*.

A NEW INJECTION FOR GONORRHOEA.—This sedative and antiseptic injection may be used even in the acute stage, with good results. It is claimed to be superior to any other single injection:

R Pulv. iodoformi, 20;
Acidi carbolicici, 10;
Glycerini, 80;
Aquæ destillatæ, 200. M.

—*Campana*.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 22, 1884.

EDITORIAL.

THE USEFULNESS OF THE CODE
OF ETHICS TO RECENT GRAD-
UATES IN MEDICINE.

WITHIN the next few weeks the medical profession of this country will be enlarged, not to say enriched, by an accession to its ranks of an aggregate of nearly four thousand recent graduates fresh from the college hall and hospital clinic. As its ranks were already comfortably well filled, this large addition to the working force of the profession in the United States may disturb slightly the equilibrium in some places, especially in those large cities where the young physician is most likely to begin his unequal struggle for existence. It was formerly the custom for the colleges to present each candidate upon graduating with a copy of the Code of Ethics of the American Medical Association, in order to give him an idea of his relations to the medical profession and the community, and their reciprocal rights and privileges, that he might govern himself in accordance with well-established rules. This pleasant custom now seems to be more frequently neglected than honored. Unfortunately, it has come to be regarded by some as quite an evidence of progress to speak slightly of the Code and of its "platitudes" and "goody-goody" teachings: in New York it has been deliberately rejected by some individuals and societies who profess to be governed only by the unwritten law of politeness, which is supposed to be sufficient for a gentleman who is also a physician. One objection to this plan is that, in the absence of a code, no agreement can be ever hoped for as to what specific

acts are "unworthy of a gentleman and a physician." But the Code of Ethics provides exactly this information to the recent graduates who are most anxious to learn what is expected of them, and what treatment they have a right to look for in return from the profession and the community. It is true that the particular rules laid down for the conduct of the patient to his physician, to which much senseless criticism and ridicule have been directed, are not read by patients, nor was it intended that they should be by the distinguished men who framed them; but they teach the physician just invested with the honors, rights, and privileges of the medical degree what courtesy he should exact from those who come under his care, according to the common custom of the honorable profession of which he is a member, so as to aid in maintaining its honor and dignity. Pascal once said that "certain individuals reject the Bible because its precepts condemn their practices;" and we confess to a similar feeling when we hear that certain individuals are restive under the Code of Ethics of the American Medical Association. It is not claimed that the Code is beyond criticism in point of expression, but as regards its principles it certainly is in accord with those of true gentlemen and honorable physicians in every clime and country. The recent graduate need not fear, therefore, to adopt its suggestions in his intercourse with other practitioners and the public.

As a rule, the young physician wishes to identify himself with the profession as soon as possible, and will therefore naturally become a candidate for admission to the nearest County Medical Society. Acting under the teachings of the Code of Ethics, such new arrivals are cordially welcomed, and in the course of time, by a process of attrition and development, they settle down to their work, each man finding his level and going to his own place. It is to be regretted, however, that some

means is not adopted, during the attendance upon lectures, to instruct students systematically in their future duties to the profession, in order that they may not be too easily misled after their graduation into some medical by-way which appears a short cut to wealth but ends too often in disgrace and disappointment. In the absence of such teaching, the student is advised to read Dr. Samuel Jackson's "Advice to a Young Physician," in which much practical wisdom is manifested and good counsel given. Too often the sound advice of the valedictory address is missed among the exciting exercises of the commencement, whereas, had it been given before graduation, it would be permanently impressed upon the minds of the students. Failing in this, the lessons of professional etiquette must be subsequently learned by observation and experience, with the aid of a good conscience. Some remarks made by Mr. Chauncey M. Depew, in addressing the graduating class of the Medical Department of the University of New York,* are so appropriate and true that they are well worth repeating.

Every professional man, he said, owes something to the community in which he lives. All the educational, humanitarian, social, and political work of the neighborhood have legitimate claims upon him. His advantages impose upon him public activities, and, in a sense, leadership. The doctor's opportunities therefore surpass all others. He should keep himself informed and interested in all public questions, the friend of good government, and the enemy of bad rulers. His personality is often as potent as his medicine. If of right mind and character, he imparts to the sufferer something of his own vitality, breezy hopefulness, and contented cheerfulness. "The Lord deliver me," said the orator, "in mine extremity, from a doctor so absorbed in his own greatness or vanity that he cannot see me, the doctor who has a hobby

and rides it rough-shod over my aching bones, or the doctor whose breath is steeped in tobacco and whiskey! An eminent physician once gave as an axiom that the secret of longevity was a clear conscience and good digestion. The secret of becoming an eminent physician is devotion to your profession, and a cleanly life and conversation."

SUICIDE BY ABSINTHE.

A CASE which was very recently reported in the Paris correspondence of the daily press, of a man who committed suicide in that city by an unusual means, is worthy of some notice.

A workman, becoming discouraged, determined to end his existence: stepping into a cabaret, he called for some absinthe, which was furnished him in a small glass, and which he drank at once. When the attendant's back was turned, he thereupon took a full bottle of absinthe from the shelf and rapidly drank off its contents. He fell to the floor in a state of coma, and then became convulsed, and shortly afterwards died.

It is, of course, well known that multitudes of our fellow-beings shorten their lives by the abuse of alcoholic liquors; but they do so unintentionally, accepting the consequences, if they think of them at all, as merely a disagreeable, though perhaps a necessary, condition of the gratification of their craving for stimulants. Individuals have also died suddenly after drinking a bottle of brandy upon a wager; but, as ordinarily used, alcohol is, as a poison, too slow and uncertain to suit either the murderer or the suicide. The toxic effects of absinthium are also well known, but usually they have been overlooked by the poisoner.

This particular case is noticed because the method of suicide was so novel in conception and so facile of execution that it may perhaps find imitators. The present pop-

* Medical Record.

ularity in France of absinthe has to some extent caused its introduction into social circles in this country, but the active nervous organization of the average American is poorly fitted to withstand the ravages upon nerve-structure belonging to the clinical history of chronic absinthe-poisoning. Under such circumstances, the futility and inconsistency of a law restricting the druggist in the sale of legitimate remedies become very evident; for the would-be suicide, if refused hydrocyanic acid by the apothecary, might accomplish his purpose by stepping into the nearest tavern and purchasing a bottle of absinthe; or, not being allowed to buy morphia without authority, he may purchase several bottles of soothing-syrup, and gather the draperies of his couch about him and lie down to pleasant dreams. Deaths from absinthe or patent-medicine poisoning* may be expected to become frequent as soon as the public begins to appreciate more fully the advantages of this form of committing suicide,—*tuto, cito et jucunde*.

LEADING ARTICLES.

IN THE CATSKILLS.

BY the completion of the New York, West Shore, and Buffalo Railroad, which courses north from Jersey City along the west shore of the Hudson River, the Catskills are brought within a few hours' ride of Philadelphia. This beautiful and well-known group of mountains, forming a part of the Appalachian system, is situated principally in Greene County, New York, but extends to the southward into the upper part of Delaware and Ulster Counties. These highlands are a favorite health-resort, and a large number of sum-

mer tourists find accommodation among them in hotels and boarding-houses during the heated term. The views are wonderfully varied and beautiful, reaching from the Green Mountains of Vermont to the Highlands at West Point, and overlooking the valley of the Hudson and the fertile fields in the farming-region to the west and south. One of the newest places of resort is the Grand Hotel on Summit Mountain, which was opened three years ago and accommodates about five hundred guests, and is situated on the line of the Delaware and Ulster Railroad.

A few words may be not without interest concerning the locality. The hotel is situated almost at the summit of a mountain twenty-eight hundred feet high, facing southwest, overlooking the beautiful Esopus Valley, which extends sixty miles, running nearly east and west, while beyond the everlasting hills rise verdure-crowned upon the horizon. Among the surrounding mountain-peaks may be seen Slide Mountain (4200 feet), Mount Cornell (3800 feet), Mount Wittemberg (4000 feet), Panther Mountain (3800 feet), Balsam Mountain (4000 feet), and Storm King (3800 feet), while the western view takes in the cultivated fields and dairy-farms.

From a recent visit of inspection of the premises, made at the invitation of Captain E. A. Gillett (who is well known among the visitors to the Catskills, as well as in this city, as an able hotel-manager, and who has leased the house for a term of years), it appears that the hygiene of the place is excellent, and that special attention has been directed to obtaining a pure water-supply and good drainage. Excellent water from a large spring about fifteen hundred feet from the house is pumped into the building and furnishes an abundant water-supply for all purposes.

The pure, invigorating mountain-air and beautiful scenery, and the walks and drives, are of course the principal attractions of such a resort; but pleasant society and out-door life such as may be found at a place like this are great aids to the restoration of health or to the enjoyment of a summer vacation. Hay-fever is said to be unknown in this neighborhood, and the dryness and purity of the air, as is usually the case in mountain health-resorts, have proved of great service in chronic bronchial disorders and incipient phthisis.

* A poison for noxious animals has recently been patented containing cyanide of potassium, 5; strychnia, 6; Irish moss, 16; cocculus Indicus, 8; white glue, 4; honey, 160; wheat, 1600 parts, and flavored with oils of anise, peppermint, rhodium, and cumin. This would do as a "succession" powder: it will probably be sold at the corner groceries by the side of Battle's Insect Destroyer, Rough on Rats, Cures for the Moria habit, and Paris green.

NOTES FROM SPECIAL CORRESPONDENTS.

NEW YORK.

THE Cartwright Lectures were delivered this season by Burt G. Wilder, M.D., February 2, 4, and 6, the subject being "Methods of Studying the Brain." The title, the author stated, was so brief and comprehensive as to be misleading. Given more extensively, it would read as follows: "Outlines and Illustrations of some Methods of Regarding, Obtaining, Preserving, Examining, Figuring, and Describing the Brains of certain Amphibia and Mammalia, which it is hoped may be of Aid in Studying the Normal Macroscopic Structure of the Human Brain." The lectures were well attended, and, although technical, were highly appreciated.

Dr. J. E. Janvrin has been appointed physician to the New York Skin and Cancer Hospital, to fill the position made vacant by the resignation of Dr. J. B. Hunter.

It is understood that a hospital devoted exclusively to the treatment of those suffering from cancer, and called the "New York Cancer Hospital," is about to be founded, to which Dr. James B. Hunter will be one of the physicians.

At the meeting of the New York County Medical Society, February 25, Dr. W. S. Halsted read a paper on "Adduction and Abduction in Fracture of the Neck of the Femur," and Dr. E. C. Spitzka one on "The Paths of Co-ordination."

Resolutions were read favoring the founding of a college of midwifery. They gave rise to some discussion, and in the course of some remarks one of the younger members expressed it as his opinion that there were already a sufficient number of specialties. The subject will come up for further discussion before the Society at its next meeting.

At the same meeting it was decided, in accordance with a motion from the chairman of the Committee on the Collective Investigation of Diseases, to send out a circular to the members of the Society, inquiring how many cases of intestinal obstruction had occurred in their practice, and whether they had in any case divided adhesive bands causing obstruction, and with what result. The discussion of such cases will take place at the next monthly meeting.

The New York Academy of Medicine seems to be in a fair way soon to extinguish the mortgage of seven thousand dollars on the property where it is located. Recently it received a gift of one thousand dollars from Dr. H. P. Farnham, and also two hundred and fifty dollars from Dr. C. R. Agnew, and sums of from fifty to one hundred dollars from several other liberal-minded members. It was voted at its last meeting to send out a

larger number of copies of its Proceedings to exchanges. At present the exchanges received far exceed those sent in return. Authors of papers, however, would still be at liberty to furnish their papers, or abstracts thereof, to the medical journals.

The retail druggists have formed a union to oppose the underselling of patent or proprietary medicines and to maintain the list-price. As a large majority belong to the union, the wholesale houses have been compelled to fall in line, and hereafter the people will have to pay the printed price or do without their sure cures for rheumatism, consumption, and diabetes, liver regulators, and universal panaceas in general. The reason for forming the union may be briefly summed up in the following suggestive quotation: "The miserable practice of selling goods at starvation rates has led to the general adulteration of drugs, medicines, and foods. Dirt takes the place of food, inert matter is introduced into powdered drugs, whereby the therapeutic power of important medicinal agents is rendered ineffectual, the physician's skill is baffled, and the patient suffers." Now, if the philanthropic proprietors of these so-called medicines will only put the price so high that no person can pay for them, and if the retail dealers will not cut the rates, the people will in the end reap a substantial blessing from this action. But this, we fear, is utopian. By the way, could not physicians, without violating the advertising clause of the Code, by public lectures, or the public prints, or by other means, give the public some idea as to the limited usefulness of medicines, and of their possible mischievous qualities? Human nature in general is selfish enough to profit by any knowledge which is likely to put money into the pocket; and one of the most profitable of means is the promise to relieve the body of suffering. If people were impressed with the fact that medicines are of but limited usefulness, even in the hands of educated physicians, and that they are an unlimited evil, laying the foundation of all sorts of pains, aches, nervous disturbances, digestive disorders, kidney-difficulty, etc., when taken indiscriminately in the form of patent medicines of unknown composition, and to avoid self-advertising pretenders and impostors,—if they were impressed with these facts, there could be no doubt that the sick would be greatly benefited, while educated and conscientious physicians would find a wider and a more desirable field of usefulness, and would be enabled in a higher degree to command the respect of the public. Information, such as everybody ought to have, regarding the action of medicines and the preservation of the health, could be given in a manner interesting and intelligible to the lay reader, and without any name prefixed or parade of titles; in fact, no knowledge need be given regarding the identity of the writer,

further than that he is a regular and highly-respected person in the profession, and that the opinions he expresses receive the approval of the profession generally. Private lectures relating to the health are given now by some leading physicians of this city at the Young Men's Christian Association: why, then, might not the general public, by an extension of this plan, be freed of some of its superstitious and nonsensical ideas regarding the applicability of medicines to the cure of disease? The better the public is educated in such things, the more evident will be the distinction between the honorable, skilful physician and the ignorant, pretentious quack. How many an innocent child's health is ruined, for instance, by soothing-syrups and patent medicines which have a reputation for quieting restless and crying babies, the active ingredient of which medicines is opium in some form! If people who are in the habit of ignorantly dealing out such poisons to their children were once convinced of this fact, and that, because of their great power to do mischief, educated physicians prescribe similar remedies only with great caution and under urgent circumstances, is it not to be supposed that they would cease to poison their own offspring? Doubtless many persons unconsciously cultivate a taste for intoxicating liquors by taking so-called bitter tonics, appetizers, etc., when in principle they are strong advocates of total abstinence. Others buy patent medicines, thinking thereby to avoid a greater expense by going to a physician. But if such people were made clearly to understand that if they really need medicine it would be cheaper, in the end, at once to employ a physician, doubtless they would do so. One might suppose that people were sensible enough to know that a remedy claiming to be a sure cure for consumption, bronchitis, all pulmonary diseases, dyspepsia, liver and kidney diseases, piles, sore eyes, and every human ailment imaginable, if capable of anything at all, is also capable of much mischief when injudiciously used; yet as proof that it is not so regarded is the fact that hundreds of remedies thus advertised bring in a sufficient income to the patentee and manufacturer to enable them to grow rich, and also more than reimburse them for thousands of dollars spent in advertising. Owing to the importance of the matter, a responsibility rests upon the profession to enlighten the community. Might not some articles instructing the people in this regard carry some weight if issued with the endorsement of County or State medical societies?

The University of the City of New York held its forty-third annual commencement at the Academy of Music, March 11, conferring the degree of M.D. upon one hundred and sixty-four gentlemen.

The Bellevue Hospital Medical College

held its commencement at Steinway Hall, Thursday, March 13, graduating one hundred and forty-nine candidates for the medical degree.
R. C. S.

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 27, 1884, JOHN A. WYETH, M.D., chairman for the evening.

CANCER OF THE PANCREAS.

Dr. G. A. DIXON presented specimens removed from the body of a man, aged 54 years, who entered Charity Hospital on November 27, 1883. He had suffered from intermittent fever. He also stated that about two months before admission he had strained himself while lifting, and two weeks later he suffered from pain in the epigastric region, which was made worse on pressure. Five weeks later he vomited blood; the pain increased; he lost flesh. On admission, he was pale, emaciated; had emphysema and bronchitis; there was tenderness over the region of the liver. There was no perceptible change in the size of the organ. December 14, pain over the liver increased. There was jaundice; the bowels were sluggish. Later there was a severe attack of epistaxis. Examination of the urine showed bile. January 5.—During the past two weeks the patient had failed rapidly, and suffered from vomiting. January 9, he became delirious, vomited frequently, and died on the 12th.

At the autopsy the lungs were found to be emphysematous; the heart was hypertrophied and dilated. There was a tumor of the head of the pancreas, composed of cancerous structure of the scirrhus variety; it projected against the duodenum, giving rise to an irregular surface, which was at first supposed to contain cancerous deposits; but none such could be found on examination. The mass was a little over two inches in thickness, and nearly surrounded the duodenum. The liver contained some small nodules, scirrhus in character. The organ was normal in size.

The speaker referred to another similar case seen in Bellevue Hospital while he was an interne in that institution. The patient had been well up to August of the same year, at which time he was seized with a severe pain in the epigastrium, radiating into the back and right shoulder. There was vomiting, but no jaundice. The patient was able to go about his work the following day. A similar attack occurred the next month. Still a third took place, which disabled him from work. Jaundice then occurred; also constant nausea and vomiting. There was a tumor, apparently attached to and movable with the

liver, over which aspiration was performed and four ounces of a yellowish-red fluid withdrawn. On the next day the tumor was diminished in size, but on the second day it was larger than it had ever been before. Vomiting continued. On December 17 the patient was suddenly seized with sharp pains as in former attacks, became unconscious, and died in the afternoon of the same day. At the post-mortem, the pancreas was found pushed forward, and attached to one side was a large pancreatic cyst with thick walls and apparently filled with a bright-yellowish mucus. The cyst replaced the head and part of the body of the pancreas.

TUBERCULOSIS TESTIS.

Dr. JOHN A. WYETH presented the left testicle which he removed from a man, 27 years of age, who had slow inflammation of the organ of two years' duration. There was a family history of phthisis. The testicle seemed to be generally broken down, and there were two or three points of ulceration; the tunica vaginalis contained pus. There had been a varying temperature. The patient made a good recovery from the operation.

Dr. F. N. OTIS had seen some cases of tuberculosis testis apparently due to reflex nervous trouble, and mentioned a case in which both testicles became the seat of tubercular degeneration, apparently from the reflex influence excited by a spinal abscess.

Dr. J. H. RIPLEY thought the temperature mentioned by Dr. Wyeth as being present in this case—viz., 103° F.—was high for uncomplicated tuberculosis of the testicle.

Dr. A. G. GERSTER had seen several cases in which the temperature went above 103°, even without complicating disease of other organs. It should be said, however, that such high temperature occurred only when there was active breaking-down process.

Dr. WYETH thought the high temperature in his case due probably to the strong phthisical taint.

ANGIOMA OF THE LIP.

Dr. A. G. GERSTER presented a specimen which had been removed from a man, 31 years of age, upon whom, thirteen years ago, Prof. Koenig, of Göttingen, performed an operation for angioma of the under lip of the size of a hazel-nut. The cicatrix remained firm for ten years, and when the patient entered the German Hospital, three years later, Dr. Gerster found nearly the entire under lip involved by cavernous angioma. Considerable hemorrhage occurred at the operation. The specimen was chiefly of interest as showing the possibility of the recurrence of this otherwise non-malignant disease after the lapse of ten years.

Dr. WYETH said that he had removed a number of angiomata from different portions

of the face, principally of the capillary variety, by excision, and he had found that scarcely a perceptible scar was left. He thought excision preferable to caustics and other methods, as removing the entire disease, and it was freer from danger.

Dr. GERSTER recalled one case in which a surgeon removed an angioma from the forehead of a young patient at the German Hospital, by the knife, which was followed by death. Doubtless, septic influence was communicated by carelessness.

MYO-FIBROMATA OF THE DUODENUM.

Dr. F. FERGUSON presented a myo-fibromata which was of interest on account of its unusual location. The patient was a middle-aged woman. The tumor had grown externally from the duodenum, and was copiously supplied with blood-vessels, which probably in time would have interfered with the function of the duodenum by pressure.

UTERINE FIBROMA.

Dr. FERGUSON also presented a specimen removed from the body of a woman, 38 years of age, who had borne seven children. Menstruation had been normal. About fifteen months prior to death, she began to suffer from pain in the pelvic region, and from back-ache and gastric disturbance. Later, she felt a tumor in the right inguinal region, which grew slowly, being, at the end of nine months, as large as a goose-egg. There was ascites. After admission, hemorrhage for the first time occurred, and of an alarming character. The operation of removal of the uterus and its appendages was postponed. Another hemorrhage occurred, and the patient died of exhaustion ten days later. The tumor was found to be sub-peritoneal, larger than a goose-egg, and the walls of the uterus were much thickened, the cavity of the organ measuring over five inches.

CARCINOMA OF THE STOMACH AND LIVER— "HORSESHOE" KIDNEY.

Dr. FERGUSON also presented specimens removed from the body of a man admitted to the hospital on February 4, 1884. He had suffered from two or three attacks of rheumatism in years past. For two years previous to admission, he suffered from "bilious" attacks, characterized by vomiting, loss of appetite, pain, and diarrhoea. He suffered for four months from distress after eating, and later from slight but constant pain in the stomach. The patient lost flesh and became cachectic. On the 12th of February there was nausea, vomiting of blood, and bloody stools. This was repeated on the 17th. During the last hours of life there was severe pain in the epigastrium. Death took place apparently from heart-failure.

At the autopsy, the cardiac end of the

stomach was found to have undergone carcinomatous degeneration: the adjacent mucous membrane was thickened; the liver was studded with numerous white nodules, surrounded by normal liver-tissue. The diseased structures presented large cuboidal epithelial cells, contained in a very fine stroma of fibrous tissue. The kidney contained some secondary deposits and had slightly undergone chronic diffuse metritis. It was of the horseshoe form.

A STATED meeting was held March 12, 1884, GEO. F. SHRADY, M.D., President, in the chair.

PERMANENCE OF THE DUCTUS ARTERIOSUS
GIVING RISE TO HYPERTROPHY OF THE
RIGHT VENTRICLE.

Dr. L. EMMET HOLT presented two hearts, one diseased, and the other, which was normal, for purposes of comparison. The diseased heart was removed from the body of a child which died at the fourth month from acute capillary bronchitis of four days' duration. The autopsy showed the lesions of that affection. There was also found constriction of the aorta about three-quarters of an inch above the aortic valve. The ductus arteriosus remained, and there was hypertrophy of both right and left ventricles, particularly so of the right,—a fact which Dr. Holt could not account for, in the absence of valvular lesion, except on the supposition that the right ventricle had to do a portion of the work of the left, pumping blood through the ductus arteriosus which would have been sent through the aorta by the left ventricle except for the constriction which existed in that tube. There was no history of cyanosis. There was no marked hypertrophy of the auricles. There was an opening at the foramen ovale, but it closed by a valve-like arrangement, preventing the passage of blood.

Dr. WYETH thought with Dr. Holt that the specimen was a rare one. Referring to the opening at the foramen ovale occluded by a valve-like action, he presented a similar specimen some years ago, removed from the body of a woman about 40 years of age. In that case he was able to pass the end of the little finger through the opening; and yet he doubted, owing to the presence of a valve-like arrangement, whether any circulation took place through it worthy of consideration.

SARCOMATOUS TUMOR OF THE DURA MATER,
WITH NEGATIVE EVIDENCE IN CEREBRAL
LOCALIZATION.

Dr. G. L. PEABODY presented the specimen, of which the history was necessarily somewhat incomplete. The patient was 70 years of age, a native of the United States, a druggist by occupation. On the evening of

January 8 he was admitted to the hospital in a comatose state, in which condition he died twelve hours later. His history was obtained from friends. It was stated that, while the patient was a good liver, he was in no sense a drunkard; there had been no seizures suggestive of epilepsy or apoplexy; he had been in comparatively good health, but had had some business trouble. Half an hour before admission, he was seen, while walking on the street, to slip and fall. He almost immediately got up and went into a bar-room; he complained of headache and vertigo. Fifteen minutes later he became unconscious. On admission, the reflexes were found almost completely abolished. There was no facial paralysis. The pupils were moderately dilated, and irresponsive to light. There was a hæmatoma of the scalp in the left parietal region; no fracture could be discovered. The respiration was stertorous, the pulse rapid and feeble; the temperature gradually rose, and before death reached 104° F. At the autopsy was found marked oedema of the lower extremities, hypertrophy of the left ventricle of the heart, chronic diffuse nephritis, oedema and congestion of the lungs, the liver both fatty and cirrhotic. There was a hæmatoma between the dura and pia corresponding with that of the scalp, and causing greater pressure of the convolutions on the opposite side. In the same region, just posterior to the motor area and one centimetre from the median fissure, was a tumor three by four centimetres in diameter, situated between the dura and the pia, and causing a marked depression in the brain. It was found to be a spindle-celled sarcoma. Dr. Peabody thought it probable that the fall had caused the hæmatoma mentioned, and that, in addition to the other lesions, aside from the sarcomatous tumor, it would account for the patient's death. It was an interesting contribution in a negative sense to the doctrine of cerebral localization, that a tumor of this size could exist in the non-motor area and produce no symptoms.

The PRESIDENT supposed that of course the sarcomatous tumor had developed gradually, and that therefore the brain would have an opportunity to accommodate itself gradually to the pressure.

Dr. R. W. AMIDON thought it was extraordinary to what extent the brain-substance could be compressed by a growth or foreign body from the periphery, provided the pia mater or cortex were not invaded or inflamed, and yet produce no apparent symptoms. He once saw a case of pachymeningitis in which the brain-substance in the motor area for a distance of four or five inches in diameter was compressed to the extent at the deepest portion of one inch, and yet there had been no symptoms until just before death, the man dying comatose. There had been no motor symptoms whatever.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 28, 1884.

The PRESIDENT, Dr. TYSON, in the chair.

Two cases of suppurative nephritis. Presented by Dr. W. E. HUGHES.

IN both of these cases the kidney-lesion had been preceded by cystitis,—in one of some months' standing, in the other of more recent origin. In both of them there was a history of gonorrhœa, and in one well-marked symptoms of stricture of the urethra; in this case the cystitis seemed to have been originated by septic matter carried into the bladder on a catheter, although a tendency to inflammation had most likely been developed by the long-standing stricture. In one case the kidney-lesion may have originated in emboli derived from a suppurating surface, though this is unlikely, from the fact that no such emboli were found elsewhere.

Case I.—A man, æt. 35 years, had locomotor ataxia for years. He had gonorrhœa, but following it no change from the normal in urination, so that it is scarcely probable that there was any stricture of the urethra. Six months ago, as the result of exposure, cystitis developed, with the usual signs of frequent passage of urine containing large quantities of mucus and pus; there were no tube-casts, and no more albumen than could be accounted for by the pus-corpuscles present. After being under observation about two months, large bed-sores developed over the sacrum and trochanters; they soon induced a septicæmic condition which rapidly produced death. At the autopsy the nervous lesions characteristic of locomotor ataxia were shown. The urinary bladder was dilated, its walls thickened, its inner surface crossed in every direction by bands of hypertrophied muscular tissue; the mucous membrane thickened and slate-colored. In the kidneys were numerous cone-shaped masses, in which the tissue of the kidney was broken down and infiltrated with pus, and the blood-vessels filled with micrococci. The remainder of the kidney-tissue appeared healthy. There were no abnormal appearances about the pelvis and ureters.

Case II.—A man, æt. 72 years, had several attacks of gonorrhœa and symptoms of urethral stricture lasting over thirty-two years. The stricture had been dilated several times; but during the six months before he came under observation it had been neglected and had begun to grow troublesome. When first seen, his urine was normal, and there were no signs of cystitis. He had been failing in health for some time, and was much troubled by a cough. Physical examination showed breaking down of the lung-structure at the apices. A few days after coming under observation, his nose bled so uncontrollably

that it became necessary to plug his posterior nares. Soon after this, his stricture almost preventing the voiding of urine, a catheter was passed into the bladder. The next day he complained much of pain and tenderness in the region of the bladder, and the urine, which was passed every few minutes, contained large quantities of blood, pus, and mucus. The acute symptoms were soon relieved, but the urine continued loaded with mucus and pus; in fact, it was often so stringy that it was only with the greatest difficulty that he could pass it. It never contained casts nor more albumen than could be expected where there was so much pus and blood. He died two months after he was first seen. The autopsy showed tuberculosis and disintegration of the pulmonary tissue. The kidneys were identical in appearance with those in Case I., with the addition that their pelves contained numerous particles of uric acid. The cavity of the bladder was small, its walls thickened and hypertrophied, the mucous membrane dark red, thickened, softened, and thrown into folds.

Dr. TYSON said that the relation of bladder- to kidney-trouble was as yet pretty much guess-work, although it is certain that, in a prolonged cystic disease, suppurative interstitial nephritis will sooner or later arise. But rarely can we state, from an examination of the urine, that renal disease has supervened. He happened, however, now to have under his care two cases of cystitis with renal disease, in which it was comparatively easy to determine the presence of the latter along with the former by reason of the presence of compound granular cells and fatty tube-casts, in addition to pus. The character of the casts pointed rather to tubular nephritis than to the interstitial form, contrary to the ordinary belief with regard to these cases.

Specimens of enlarged bronchial glands which had caused intra-thoracic pressure. Exhibited by Dr. E. T. BRUEN.

These specimens were taken from the body of a man, æt. 44, who had suffered for some years from chronic bronchitis, probably due to exposure in the gas-works. There was no emphysema. The bronchial glands are deeply pigmented and much enlarged,—forming in all a mass five inches long, three inches broad, and two inches thick. This enlargement surrounds the trachea, and slightly overlaps it anteriorly. A portion of the formation covers the origin of the right bronchus, but the left is also somewhat enclosed by the enlarged glands. In addition, many isolated bronchial glands will be found much increased in size. The lungs presented evidences of chronic bronchitis and lymphatic irritation. The aorta is atheromatous and dilated; the heart normal. This specimen is exhibited chiefly to illustrate the possibilities of intra-thoracic press-

ure from this source. It will be seen that these enlarged glands occasioned serious pressure upon the lower portion of the trachea and the upper portions of the bronchi. During life there were many symptoms traceable to reflex irritation of the pneumogastric nerve, and there were also symptoms of pressure upon the œsophagus.

The writer has published a detailed account of the symptoms incident to similar conditions in the *American Journal of the Medical Sciences*, July, 1883.

The cause of the enlargement of the bronchial glands in this case must have been the chronic bronchitis, although similar enlargements sometimes follow dilatations of the aorta. It is curious to note that degenerative changes in the lungs or hepatization were not observed.

Dr. SHAKESPEARE said that the case was of interest from several points of view, one of which was the great enlargement of the bronchial glands without either lung or other thoracic disease. It was an extraordinary thing that the enlargement had progressed so far without any apparent primary point of origin in the tissues in which the lymphatic radicles take their rise.

Dr. TYSON was inclined to attribute their enlargement to anthracosis.

Dr. BRUEN said that one of the latest writers upon bronchitis states that the reason for the intractability of chronic bronchitis is the constant coexistence of lymphatic disease, thus inducing venous congestion, catarrh, etc.

Cystic degeneration of a fœtal kidney. Presented by G. E. DE SCHWEINITZ, M.D.

I desire to present this evening an example of cystic degeneration of a fœtal kidney. The specimen was removed from an eight months' fœtus, brought to the University Museum by Dr. George Horn, of this city. The fœtus in question, in addition to this anomalous condition of its kidneys, presented also other interesting abnormalities, having, at the position of the posterior fontanel, a large meningocele; further, an imperfect development of the external genital organs; also six fully-developed fingers upon each hand, and a similar number of equally fully-developed toes upon each foot. Upon opening the abdominal cavity, both kidneys were found to present the appearances of the one exhibited to-night. It is enlarged, having a length of about four and a half inches and a breadth of nearly three, or a little greater than the size of a normal adult kidney. The capsule can be detached with a moderate degree of force, and the organ is surrounded with its usual envelope of perinephritic fat. Both upon the free and upon the cut surface are seen numerous cysts, varying in size from a small marble to a split pea, or even smaller; each cyst having a moderately firm capsule,

and, upon incision, discharging a fluid contents. Very distinct lobulation of the kidney is a marked feature. It is perfectly plain that we have here a specimen of what is referred to by systematic writers upon pathology as congenital renal cysts. Rindfleisch speaks of kidneys of this sort usually producing death to the child either during birth or immediately after, by pushing the diaphragm up and thus occupying space necessary for the movements of the lungs. He further indicates that the Malpighian corpuscles constantly prove the points of departure for these cysts, although degeneration in the continuity of a urinary tubule may also contribute to the formation of the cystoid change. Both Virchow and Rindfleisch consider "an intercalation of a mass of connective tissue between the renal calyces and renal papillæ" as a cause of this congenital cystoid degeneration. A rather hurried microscopical examination of this specimen reveals the following points: nearly a total absence of any true renal structure, the greater mass of the organs being composed of connective tissue, through which are scattered numerous free nuclei; cysts the walls of which are lined with a single layer of cubical epithelium, and in these, which evidently arise from Malpighian corpuscles, the remains of the vascular tuft are sometimes seen, the wall having been drawn back from the vascular coil, as Rindfleisch puts it; quite large vascular channels and blood-vessels, usually filled with blood-corpuscles; and, finally, decided areas of fatty infiltration, the fat-cells having inserted themselves between the connective tissue. Further and fuller microscopic examination of the organ may probably discover other and different changes which have not been described. Joh. Klein demonstrated renal cysts in an adult case to arise from degenerated Bowman's capsules, which contained cholesterin crystals, fat-granules, and calcareous grains, or, as he expressed it, "renal sand." Such conditions were not discovered in this case.

Dr. TYSON said that it was remarkable how long persons with this congenital cystic trouble will live. Adults are found, post mortem, with kidneys the size of a fœtal head, with cysts as large as marbles, and apparently no renal tissue left,—conditions which have evidently existed for years.

Round-celled sarcoma of the superior maxilla; excision of that bone with the malar.
Exhibited by Dr. C. B. NANCREDE.

Thomas A., æt. 56 years, was admitted to the male surgical ward of the Episcopal Hospital in the fall of 1883 with what appeared to be an ordinary epulis of the back part of the right superior maxilla. On November 2, 1883, Dr. Packard removed the growth, with the contiguous alveolar processes, and wiped out the wound with a twenty-grain solution of

chloride of zinc. Microscopic examination of the growth showed it to be a small round-celled sarcoma. It rapidly returned, so that in two weeks the growth was larger than when first removed. Dr. Packard removed this second growth, with the outer wall of the antrum, the alveolar border, and most of the maxillary tuberosity, and again wiped out the wound with chloride-of-zinc solution. All morbid tissues seemed removed: yet in less than six weeks it again began to fungate, and during the past week its enlargement can only be compared to that of a mushroom, the increase from day to day being readily perceptible. On February 27, 1884, the growth nearly filled the mouth and pharynx, and pressed upon the tongue so that deglutition was almost impossible. Accordingly, upon that day, I proceeded to perform a formal excision of the upper jaw, removing also the right malar and part of the left side of the ethmoid. Owing to the efficient assistance of my colleague, Dr. Forbes, the hot iron was unnecessary, the internal maxillary being caught and tied with singularly little loss of blood.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 6, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The scientific paper of the evening was read by Dr. GEORGE B. FOWLER, on

THE DETECTION OF ALBUMEN IN URINE, WITH A REVIEW OF THE METHODS RECENTLY ADVANCED.

The lecturer premised that he should treat of the subject in a somewhat elementary manner for the purpose of making himself perfectly understood. Albumen might be native or derived. The *native albumen* of the urine is like that which normally exists in the blood-serum, and is therefore called serum albumen. A variety of substances are capable of demonstrating the presence of this serum albumen, but many of them are not applicable for the purpose of detecting its presence in the urine because of the complex nature of this fluid. He should consider only those reagents which are of practical value.

The following methods were given for detecting the presence of serum albumen in the urine:

Heat. If serum albumen be subjected to heat, it will grow opaque at about 60° C., and coagulate at about 73° or 74° C. The solid coagulum contains about nine per cent. of albumen. By this test the paralbumen present cannot be distinguished from the albumen, as both are alike coagulable by heat.

The coagulum from diluted albumen is less firm and the opacity less marked. If to the pure albumen an organic acid be added, no

coagulum would be formed by the after-application of heat, as by the addition of acid, albumen is converted into an acid albumen, which is not coagulable by heat. This is an important practical point, as the physician might make the mistake of introducing, for instance, nitric acid before applying heat, expecting to find the albumen precipitated if any were present.

A similar occurrence is noted in very alkaline urine, for, if to serum albumen a considerable quantity of an alkali be added, an alkaline albumen would be formed, which is not thrown down by heat. Very alkaline urine, therefore, requires a little acid to neutralize its excessive alkalinity, in order to detect the presence of a trace of albumen.

The *derived albumens* are formed when the fluid containing the albumen is excessively acid or alkaline, and such derived albumens have their own reagents. By diluting an alkaline or an acid urine up to the point of neutralization, a precipitate of albumen can be obtained by the application of heat. The proportion of albumen which heat will thus detect is about .2 per cent. Heat applied to a solution containing this proportion of albumen will cause a slight but evident opacity, if the solution be neither strongly alkaline nor strongly acid.

Mineral acids will also precipitate albumen, and one of the best and most delicate tests is nitric acid. It will detect .1 per cent. trace of albumen by overlaying the acid with the urine in a test-tube.

The neutral salts, subsequently acidulated, will precipitate albumen. For instance, the preparation of chloride of sodium, which is used by Dr. Roberts, of Manchester, England, Dr. Fowler considered a very delicate test indeed; but he did not esteem it as highly as a solution of the ferrocyanide of potassium. The brine, when kept a while, is open to the objection that the salt forms crystals about the stopper and mouth of the bottle. Ferrocyanide of potassium in solution with a weak acid will reveal a .1 per cent. solution of albumen.

Picric acid, which was first brought prominently forward as a reagent for the detection of albumen by Dr. Johnson, of England, is a very delicate and excellent test, and will show the presence of a .1 per cent. solution of albumen. It is, however, open to the objection that it also precipitates the peptones, the urates, and the cinchona alkaloids when they are present in the urine. But if these substances were present they could be made to disappear simply by the application of heat, or, in the case of one, by reaction with Fehling's solution. It is necessary, in using picric acid, to add an equal bulk of the acid and urine; for, if but a small amount of the reagent be employed, the precipitate which it caused will readily disappear on shaking the test-tube.

Dr. Oliver, of London, has recently introduced the tungstate of sodium with a weak acid, first employed in France, as a test for the presence of albumen in the urine. It shows the presence of a .1 per cent. solution of albumen. The most delicate test which has been introduced is the potassa-mercuric iodide, which is made with iodide of potassium 3.32 ccg., mercuric bichloride 1.35 ccg., and water 100 ccm. It is a perfectly clear and transparent liquid, and when added to albumen in this state it produces no effect; but with the addition of a weak acid, citric or acetic, a marked coagulum is formed. It revealed the presence of a .01 per cent. solution of albumen.

The importance of being able to examine urine for the presence of albumen at the bedside of the patient is generally recognized, but until recently no convenient method had been presented. The object has now been attained, however, by Dr. Oliver, with the use of his test-papers. They are made by saturating paper with the solution of tungstate of soda, with potassa-mercuric iodide, or with the ferrocyanide of potassium, and other papers are acidulated with citric or acetic acid. Let these papers dry, cut into small strips, put into a box with a partition, and, when desired to examine a specimen of urine for albumen, put one of each of the two kinds of paper into the fluid, and if albumen be present it will be seen to precipitate in a cloud. The most delicate of these test-papers is the potassa-mercuric iodide, which easily reveals the presence of .05 per cent. of albumen. Indeed, the test is so delicate that in nearly every specimen of urine, from the healthy as well as from the sick, a slight precipitate of albumen takes place.

The author demonstrated the use of these several reagents, and expressed special preference for the test-papers of potassa-mercuric iodide prepared by Dr. Oliver; but the nitric acid, picric acid, acidulated solution of ferrocyanide of potassium, potassa-mercuric iodide, and the tungstate of sodium, are all very good and reliable tests.

DISCUSSION.

Dr. E. D. HUDSON was requested to open the discussion, and said that, as had been suggested by the President, the general practitioner of medicine regards the examination of urine for albumen from a practical point of view. He wishes not only to be acquainted with the most convenient and safest methods for determining the presence of albumen, but he wishes also to be informed of the significance of that material when present. But, limiting further remarks to the methods of examination, he had kept himself informed with regard to the new reagents which had been introduced, but he had been, and was now still more, convinced that for the busy practitioner none of the new methods are

likely to prove more practical and reliable than the old one of heat and nitric acid. He did not think that the diagnostic significance of the presence or absence of albumen is such as would justify us in neglecting further examination by the microscope in a case of suspected renal disease. As phosphates are so commonly present in urine, and are precipitated by heat, he makes it a custom to keep a vessel of ice-water on the table, and immediately after getting a precipitate from heat he places the tube in the cold water, and by the time another specimen is examined, the phosphates, if any are present, disappear.

Dr. G. GRISWOLD said there were two points from which to view this subject. One was the chemical, the object of which was to detect the least possible trace of albumen; the other, the clinical, the object of which was not so much to detect the least possible amount of albumen as to furnish a convenient and practical test for the physician. The mere presence of a small amount of albumen in the urine is not now considered of such serious significance as formerly it was. Probably the old heat and nitric acid test are all that is needed from a clinical stand-point. It is important to have a perfectly clear specimen of urine, and if necessary liquor potassæ should be added. It is further necessary to view the specimen against a dark background, especially if but a trace of albumen be present.

Dr. C. DOREMUS heartily endorsed the remarks of Dr. Griswold regarding the distinction between the clinical and the chemical stand-point in viewing methods of examining urine for albumen. The test-papers of Dr. Oliver, however, might be very convenient for use at the bedside. The results of the most delicate tests were apt to be obscured by the want of a perfectly clear specimen of urine. He had found the ferrocyanide of potassium and acid test a very good one.

Mr. MUNN had been able to detect the presence of albumen in the urine after the use of a reagent by placing it in a pencil of light as it came through a hole in a dark window-shade, after others had failed to do so.

Dr. MAXWELL thought there was but little difference between the picric acid test and tungstate of sodium as regards delicacy of test for albumen. But we should not depend upon a single reagent. It is always safer to apply several different tests in any given case. But the mere presence of a small amount of albumen in the urine, without other signs or symptoms, he did not regard as of serious significance.

Dr. FOWLER, in closing the discussion, agreed with the last speaker that entire reliance should not be placed upon a single test. He could not agree with Dr. Griswold that we should not go into unexplored fields. It had

not been determined that the traces of albumen revealed by the more delicate tests were not of clinical significance. That peptones were sometimes present in urine he had witnessed, and the best test therefor was reaction with Fehling's solution.

THE MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA.

THE first stated meeting of this Society after its organization was held at the hall of the College of Physicians, Philadelphia, March 11, 1884. Professor S. D. GROSS, M.D., President of the Society, occupied the chair. About fifty members were present.

Dr. JOHN J. REESE read the paper of the evening, entitled

MEDICAL EXPERTS.

After speaking of the importance of medical expert testimony in criminal trials,—especially in capital cases,—Dr. Reese replied to the question, "Who are medical experts?" by remarking that the courts allowed a very considerable latitude in their definition of this term, permitting any person to act as such, no matter with what school of medicine he was connected, whether educated or ignorant, provided he announced himself as a practitioner of medicine and acquainted with the points under discussion at the trial. The consequence of this laxity on the part of the courts is that no distinction is practically made between the competent and the incompetent medical expert, the latter being permitted to give his evidence with all the force and authority of the most skilled and learned witness, and thus might completely neutralize and invalidate the testimony of the former.

Dr. Reese adverted to other evils connected with our defective system of medical expert testimony: one is the too frequent custom by opposing counsel of retaining "experts" in certain criminal and will cases who are known to have a bias towards some *lobby*, or preconceived notion, which might support their particular side; and also of a still lower and more reprehensible employment of such testimony, where the "expert" makes his *opinion* a matter of barter and sale to the party employing him. Of course the latter evil will only be found among the unprincipled charlatans of each of the professions of medicine and law; but the very fact of its existence is a strong ground of appeal for its correction.

The remedy proposed and advocated by Dr. Reese for the admitted imperfections of our present system of medical expert testimony is, first, to insure a more thorough and systematic education of those physicians who propose to offer themselves as medical experts; and, secondly, the adoption of the plan of *State medical experts*, as founded upon the

German system, and which has been shown by experience to secure the desired end better than any heretofore employed. The outline of his plan, which he does not claim to be original, is as follows. Let there be appointed by the proper State authorities a medical officer, to be named the "State Medical Expert." He shall be a thoroughly-educated practical physician, and one properly trained in all the details of medical jurisprudence, including toxicology. His duties shall be to attend at any criminal trial in his district, when summoned by the court, as the skilled witness for the prosecution. He shall sit with the judges throughout the whole trial, as the *amicus curiæ*, giving special attention to such points as may require the professional assistance of medical experts, so that he may enlighten the court and jury on the technical aspects of the case. He shall, if desired, assist the prosecuting counsel in preparing the case, by suggesting the proper questions to put to the professional witnesses. He shall be prepared to make all the requisite medical and toxicological investigations in any case requiring them, thus in poison cases saving the district attorney much trouble and expense in hunting up a suitable toxicologist. By his expert testimony the prosecution would always be guided. He should possess a chemical laboratory, and all other appliances necessary for the complete fulfilment of his duties. Although summoned by the State, he is by no means to be regarded in the light of a partisan, any more than the judge upon the bench. He can have no temptation to a bias for either side. He would give his opinion grounded solely upon truth, and his moral and professional character and acquirements should be such as to preclude the possibility of error, so far as is consistent with human infirmity.

In most criminal trials the testimony of such an official expert (as in the case of the late distinguished Professor Casper, of Berlin), commanding, as he ought to do, the respect and confidence of all parties, would be deemed fully adequate to settle all scientific questions. But there would doubtless be some cases in which the defence would claim the right (which of course would be always conceded) of employing their own expert. But this need produce no collision with the State officer, since if the former be a thoroughly competent expert he will be the more likely to agree with the latter.

In a State so populous as Pennsylvania, there should be at least two such officials,—one for the eastern and one for the western district,—possibly more. The salary should, of course, be sufficiently ample to command the very best talent, inasmuch as the medical officer would necessarily be compelled to relinquish all practice and devote himself exclusively to his State duties. But even in an economic point of view the State would

probably be the gainer by the proposed arrangement, inasmuch as the yearly aggregate amount which the various counties are compelled to pay out for toxicological and other examinations in their respective criminal trials would equal, if not exceed, even a liberal salary allowed to the State medical expert.

The only real difficulty would probably be in the mode of appointment. Unquestionably, such a dignified office ought to be lifted high above all political favoritism. It should be bestowed only upon the most competent. But who shall decide this important question of competency? Obviously, not the Legislature, for it could have no means of judging of qualifications except through the representations of constituents; and everybody knows that these must partake largely of the worst forms of political favoritism. Neither should the responsibility be laid upon the Governor, for a like reason. The State Medical Society might by some be deemed the proper body to, at least, suggest the suitable appointee to the civil authority, but it is to be feared that even here there might be some risk of cliquism, ring-influence, or favoritism. On the whole, it would seem that the safest body with whom to lodge the responsibility would be the judges of the Supreme Court of the State. They might act in full council, after due consideration of the claims of the respective claimants, and their decision, to be determined by vote, would doubtless be regarded as impartial and satisfactory by all.

Remarks were made on the paper by R. C. McMURTRIE, Esq., Dr. HENRY LEFFMANN, Judge ASHMAN, and others.

Some routine business followed the discussion.

REVIEWS AND BOOK NOTICES.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By JAMES ROSS, M.D., LL.D. Second Edition, Revised and Enlarged. New York, William Wood & Co., 1883.

The work of Dr. Ross as it lies before us may certainly be characterized as one of great magnitude. In length, breadth, and thickness it rivals not altogether the pyramid of Cheops, but it surpasses it in complexity; and when we consider the enormous number of laborers who have threshed out with infinite toil the multitudinous grains of knowledge which have been gathered by Dr. Ross into this great granary, it may be that almost as much of human labor and of human suffering are represented in this monument of modern science as in the mausoleum of the Egyptian despot.

The two volumes are each of about a thousand pages, and might better be called an encyclopædia than a treatise. Much of the space is occupied with anatomical and physi-

ological discussions, which we confess seem to us out of place in such a book. Anatomical and physiological treatises abound, and are, or ought to be, in every doctor's library. The student studies these sciences before he does the Practice of Medicine; and the practitioner who wants to furbish up his anatomy naturally turns, not to his books on Practice of Medicine, but to his Sharpey and Quain or to his Allen.

It is plain why many men are so prone to load their pages with irrelevant matter as Dr. Ross seems to us to have done: it is because the subject has grown up in such manner in their own mind: when an author wishes to write on a brain-region, he restudies first the anatomy and then the physiology of the part, and is apt to forget that it is the fruit, not the methods, of his labor that the reader desires.

All this may seem trifling and unworthy of notice in a review; but to the man whose literary needs are greater than his purse-power it is no trifle to have to buy five dollars' worth of anatomy in duplicate in order to get ten dollars' worth of nervous diseases. Then, when one wants to find a thing in a hurry it is very provoking to have to wade through bogs of anatomy to get to the land he is searching out.

The great French systematist, Prof. Grasset, has had a much truer and more artistic instinct, and hence his book is more satisfactory to the neurologist who reads French than is that of Dr. Ross. While saying this, we hasten also to say that, so far as the English language is concerned, Dr. Ross's treatise is the best to be obtained. It bears the mark of much conscientious work, is usually very clear, although somewhat heavy, in style, and is written with judgment.

Whilst perusing the book, we marked a number of places which seem to us to need comment. Some of these we shall allude to; for others, space is wanting. Thus (volume i.), in the discussion of the "Trophic Affections in the Territory of the Trigeminal Nerve," p. 509, no mention is made of the curious but carefully-studied affection, probably due to sclerotic changes in the trigeminal nuclei, in which the teeth suddenly drop out from atrophy of their sockets, and finally the whole dental region wastes away. On p. 562, when considering the "Treatment of Chronic Spinal Accessory Spasm," nothing is said concerning the use of the actual cautery, which we have seen to cure this most obstinate affection. "Migraine" is treated of as a disease of the sympathetic nerve, of which, however, there seems to us no proof. This is theoretical matter; but, as an exceedingly practical fact, we should like to recommend the combination of the bromide of potassium and the deodorized tincture of opium (3i to ℥ss), as almost a specific in the paroxysms of pain. We have seen this combination over and over again enable a patient to rise

and go about her daily duties, relieved, without being apparently influenced in any other way. If the patient be impressed with the fact that the system gradually gets accustomed to this narcotic, and the remedy must be husbanded, great relief may be obtained for many years. We know of one lady who for twenty years has thus robbed an inherited migraine of its terrors, although now ninety grains of bromide and forty minims of the deodorized tincture constitute the least effective dose.

A reference to standard therapeutic authorities would have shown Dr. Ross the incorrectness of the assertion (p. 307) that "bromide of potassium also appears to lower the irritability of the motor mechanism, while chloral acts more exclusively on the sensory mechanism."

The article on "Epilepsy" ought, according to our thinking, in another edition to be rewritten, so that idiopathic, reflex, and organic epilepsies may be clearly separated, since they are really distinct diseases, to be treated of separately and not confounded. We think there are few things more misleading than the statistics of epilepsy, because this jumbling together of distinct affections has been so common. The differential diagnosis between hystero-epilepsy and epilepsy (vol. ii. p. 916) is not at all borne out by our experience. Hysterical convulsions may be attended with complete loss of consciousness, and are not always, at least in America, preceded by an aura.

In concluding the notice of this very important work, we wish for it the success and development of many editions, and, as a Parthian blessing, call attention to the fact that no place has been found in its index either for apoplexy or brain-softening. We are very glad to note, as an indication of growth in honesty among our American publishers, that, although the title-page bears the impress of a New York firm, the book was printed in Manchester, where its wretched muslin covers indicate that it was also bound. The typography is unexceptionable, the proof-reading most creditable.

H. C. W.

GLEANINGS FROM EXCHANGES.

STATISTICS OF PORRO'S OPERATION.—At the last meeting of the British Medical Association, Clement Godson, M.D., read a very valuable paper before the Obstetrical Section upon Porro's operation, which he defined as a "Cæsarean section followed by removal of the uterus together with its appendages, including the ovaries, leaving only the cervical portion of the uterus." He stated that Joseph Cavallini, in 1768, observed that removal of the uterus could possibly be accomplished without danger to life; but G. P. Michaelis, of Marburg, in 1809, first suggested that the

results of Cæsarean section might be improved by the extirpation of the uterus. Blundell, in 1828, recommended this operation, and by experiments upon rabbits proved that it might be safely performed. It was, however, to an American that the world owes the demonstration of the applicability of the operation to the human race. Dr. Horatio Storer, of Boston, after performing a Cæsarean operation, found that there was such serious hemorrhage caused by fibro-cystic tumor that he also removed the uterus. The patient had been three days in labor with a putrid foetus *in utero*. She died sixty-eight hours after the operation. The first premeditated utero-ovarian operation in connection with Cæsarean section was performed by Prof. Porro, of Pavia, (now of Milan,) in 1876, by which he succeeded in saving the lives of both mother and child.

Dr. Godson gives the details of a successful operation performed by himself upon a dwarf whose pelvis had been crushed in childhood by a dray passing over her body. Without repeating the steps of the operation, it need only be stated that there were several upon which the lecturer laid especial stress. (1.) Preliminary passage of a catheter in order to empty the bladder and to indicate its exact location. (2.) Constricting the neck of the uterus by the hands of an assistant, so as to prevent hemorrhage, while the uterus is *in situ*, in preference to Müller's modification, which necessitates a much longer external incision (Müller's modification he recommends only where the uterine contents are putrid). (3.) The incision in the uterus he made transversely just above the junction of the body and neck of the uterus, making a small opening with the knife and enlarging it by tearing with the fingers. (4.) Extracting the child by the neck. (5.) Not removing the placenta. (6.) The treatment of the pedicle by fastening it in the lower angle of the wound by two long pins and Koeberle's *serre-nœud*. With strict Listerian precautions during the operation, drainage need not be provided for.

Accompanying the paper was a tabulated statement of one hundred and thirty-four cases, from different operators all over the world. Of these, thirteen had the pedicle treated by the intra-peritoneal method, of which three recovered and ten died. Of the remaining one hundred and twenty-one treated by the extra-peritoneal method, fifty-seven recovered and sixty-four died. Total mortality to mothers, seventy-four, or over fifty-five per cent. There were one hundred and eleven living children born, including two pairs of twins—one in Italy and one in Austria,—both of which lived.—*British Medical Journal*, January 26, 1884.

A CASE OF SUPPOSED DISLOCATION OF THE TENDON OF THE LONG HEAD OF THE BICEPS MUSCLE.—Dr. J. William White records (*American Journal of the Medical*

Sciences for January, 1884) a case of this very rare form of luxation, and reviews the history of the few other cases in which this accident is supposed to have occurred. The study of the literature of the cases recorded leads to the conclusion that although for more than a hundred years cases of supposed luxation of the tendon of the long head of the biceps muscle have been reported or alluded to by surgical writers, yet they have been so poorly observed or so carelessly described that they fail altogether to carry conviction, the one case (Soden's) which possesses any strong element of probability being itself open to reasonable doubt.

The symptoms in Dr. White's own case, which led him to the conviction that there had been true traumatic luxation of the bicipital tendon, may be enumerated as follows:

1. The recognition of the bicipital groove empty, which, if its existence be admitted, is pathognomonic.
2. Recognition of the tendon itself.
3. The inward rotation of the arm.
4. A slight depression under the tip of the acromion, a prominence of the shoulder in front, and a flattening behind.
5. Diminution in the vertical circumference of the shoulder.
6. Shortening of the arm as measured from the tip of the acromion to the external condyle.
7. Elevation of shoulder, tilting up of acromion, and elongation and narrowing of axilla when the arm was carried upwards.
8. The peculiar depression situated over the bicipital groove.
9. The line of ecchymosis following and strictly limited to the course of the biceps muscle.
10. A creak or "squeak" heard distinctly on carrying the elbow away from the side.
11. Flexion of the forearm on the arm was painful, the pain being sharp, lancinating, and felt at the front of the shoulder; flexion during supination was much more painful than flexion during pronation.
12. When extension of the forearm was attempted, a tense line along the edge of the biceps could be both felt and seen.
13. The pain felt over the joint was also felt along the line of the biceps as far as its insertion, and the patient still has a "drawing" sensation over that region.
14. The arm was preternaturally mobile for some time after the accident.
15. The position of the patient after the accident.
16. The character of the force producing the difficulty.

The rationale of these symptoms is very fully explained.

MALIGNANT PUSTULE FROM THE-BITE OF A FLY.—A somewhat remarkable case of malignant pustule communicated by a fly is reported in the *Gazette des Hôpitaux*. The patient was bitten in the cheek by a large black fly, which he immediately killed. The bitten spot in a few hours began to itch violently, but no swelling appeared until the next day. When the patient entered the hospital the whole cheek was of a livid color

and enormously swollen, especially over the malar bone, the centre of which region was occupied by a small, black phlyctæna, surrounded by a number of transparent vesicles. The eyelids were considerably swollen, and one of the submaxillary glands was enlarged and tender. There was no fever or other constitutional symptom. Dr. Molière's treatment was prompt and energetic. He first completely destroyed the pustule by means of the thermo-cautery, and then injected the swollen parts, including the submaxillary gland, with a twenty-per-cent. solution of carbolic acid. The only internal remedy employed was alcohol, which was administered in enormous quantities without producing the slightest sign of intoxication. The affected surface began to slough off on the third day, and in another week was entirely detached. The healing process proceeded rapidly, and at the end of three weeks the patient was discharged. Blood and serum drawn from the vicinity of the pustule having been forwarded to an eminent expert for examination, he succeeded in detecting a few filaments of the *bacillus anthracis*, and a guinea-pig which was inoculated with the fluids died in a few hours with all the signs of specific gangrenous infection.—*Druggists Circular*.

CHOREA SIMULATED BY DISSEMINATED SCLEROSIS.—M. Marie (*Jour. de Méd. Prat.*, October, 1883) has collected fourteen cases of disseminated sclerosis in children, most of which were observed in England. The symptoms are the same as in adults, and may begin as early as the fourteenth month, but more frequently they do not appear before the third or fifth year. The disease is sometimes hereditary, but in other cases it follows some eruptive fever. It may be mistaken for hereditary tabes and chorea, but in the latter the involuntary movements persist during rest, and the muscles of the face, eye, and tongue are not affected.—*London Medical Record*.

TYNDALL ON EVOLUTION.—Professor Tyndall says on this subject, "If asked whether science has solved, or is in our day likely to solve, the problem of the universe, I must shake my head in doubt. Behind, above, and around us, the real mystery of the universe lies unsolved, and, as far as we are concerned, is incapable of solution. The problem of the connection of the body and the soul is as insoluble in its modern form as it was in the pre-scientific ages. There ought to be a clear distinction made between science in the state of hypothesis and science in the state of fact, and, inasmuch as it is still in its hypothetical stage, the ban of exclusion ought to fall upon the theory of evolution."—*Medical Journal*.

HYDROBROMIC ACID FOR EPILEPSY.—Dr. H. C. Wood believes that hydrobromic acid,

which is an efficient substitute for potassium bromide, has advantages over it in its pleasantness of administration and in its less liability to produce acne. Where it has failed in reported cases it is because it was given in insufficient doses as compared with the bromide salts. He gave, in a number of cases of inveterate epilepsy, doses increased up to an ounce of the official solution, three times a day, with good results,—even better than from the bromides themselves. One drachm of the official solution is equal only to about nine grains of potassium bromide. "Even in large doses the acid agreed very well with a delicate stomach.—*Medical News*.

THE THERAPEUTIC EFFECT OF BOLDO LEAVES, imported from Chili, is claimed to be similar to that of coca. In the hospitals of Paris it has been used with perfect satisfaction in affections of the liver and in gallstones. The drug is best administered in the form of a concentrated tincture or elixir that contains all the active principles.—*Répert. de Pharmacie*.

MISCELLANY.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—The thirty-fifth annual meeting will be held in Philadelphia on Wednesday, Thursday, and Friday, May 14, 15, and 16, 1884, commencing on Wednesday, May 14, at 9 A.M.

Amendment to be acted on.—By Dr. H. Leffmann: "No paper shall be read before this Society unless the same shall have been previously read, either in full or in abstract, before a County Society, and by it referred to the State Society."

Appointments for 1884.—To prepare address in Surgery, Dr. John B. Roberts, Philadelphia; to prepare address in Obstetrics, Dr. Jacob Price, West Chester; to prepare address in Hygiene, Dr. Benjamin Lee, Philadelphia; to prepare address in Mental Disorders, Dr. Alice Bennett, Norristown; to prepare address in Medicine, Dr. W. H. Daly, Pittsburg; to prepare address in Ophthalmology, Dr. William S. Little, Philadelphia.

Secretaries of County Medical Societies are earnestly requested to forward at once complete lists of their officers and members, giving post-office address of each.

Every delegate, before admission, shall produce a certificate of delegation, signed by the President or Secretary of his County Society.

Every permanent member (not a delegate), before admission, shall produce a certificate of good standing in his County Society.—(*Extract from Constitution*.)

WILLIAM B. ATKINSON, M.D.,

Permanent Secretary.

Railroads.—The Pennsylvania Railroad and its branches, and the Philadelphia and

Reading Railroad and its branches, will issue excursion tickets at the rate of two cents a mile. All who desire to avail themselves of this should notify the Permanent Secretary, stating the number of excursion orders required, and the railroad over which the party must travel to the place of meeting.

THE WEIGHT OF THE HUMAN BRAIN.—The recent discussion about the weight of Turgenieff's brain (2012 grammes) has led to the publication of an article on the subject of the weight of brains by a Russian scientist, M. Nikiforoff, in the *Novosti*. According to him, the weight of the brain has no influence whatever on the mental faculties. The average weight of a man's brain is, according to Luschka, 1424 grammes, of a woman's 1272 grammes; Krause gives the averages as 1570 and 1350 respectively. The maximum weight is said to be 1600 grammes, and the minimum 800 grammes. The brain of the celebrated mineralogist Haussmann weighed 1206 grammes. It ought to be remembered that the significance of the weight of the brain should depend upon the proportion it bears to the dimensions of the whole body, and to the age of the individual. Byron died at the age of thirty-six, the great geometrician, Gauss, at seventy-eight years of age: the brains of the two should, therefore, not be compared. It is equally important to know what was the cause of death, for long disease or old age exhausts the brain. To define the real degree of development of the brain, it is, therefore, necessary to have a knowledge of the condition of the whole body; and, as this is usually lacking, the mere record of weights possesses little significance.

THE WOMEN'S MEDICAL COLLEGE OF PENNSYLVANIA held its thirty-second annual commencement at Association Hall, Philadelphia, at noon, March 13, 1884, at which the degree of M.D. was conferred upon twenty-six graduates, all of whom had studied for three years at the college, and some of them had taken a four years' course. The three years' graded course has been adopted at this institution, but the students are encouraged to take four years. A great improvement has been observed in the *personnel* of the classes since the adoption of the increased requirements for graduation and the lengthening of the course.

A reception was given at the college building in the evening, after the commencement, which was largely attended, when the "sweet girl-graduates with golden hair" received the congratulations of their friends. The college is in excellent condition, is well planned and ventilated, and is admirable in its appointments.

THE TRUMBULL COUNTY MEDICAL SOCIETY, of Ohio, has followed the plan of the Pennsylvania State Medical Society of appointing examiners to decide upon the fitness

of applicants for admission to the study of medicine, and has adopted its schedule of minimum requirements. Unfortunately, the profession is utterly powerless to enforce such a rule, unless the medical schools generally will agree not to accept students if unprovided with a certificate of fitness to study medicine from a county medical society. A few of the leading colleges may carry out such an arrangement; but, in that event, what should be the attitude of the profession to the other schools and their graduates?

A RARE BIRD.—It is reported that they have secured a genuine specimen of the *rara avis* known as an "allopathic" doctor in the city of Washington, and it has been proposed in Congress that the government shall erect a national university, with a million-dollar endowment, in order to give him a chair. It is expected that he will lecture during the winter, and travel with Barnum's great moral show during the summer, in company with the white elephant.

CHOLERA-BACILLUS.—Koch reports the finding of the same bacilli in the intestinal tract of cholera-patients in Calcutta that he found in Egypt, but has not yet demonstrated that they are peculiar to cholera, or that they are the only and efficient cause of the disease.

MEDICAL AID FUND OF THE AMERICAN MEDICAL ASSOCIATION.—Dr. Frederick Horner, of Virginia, strongly urges the wisdom and humanity of establishing a national medical aid fund by the Association.

NOTES AND QUERIES.

OBITUARY NOTICES.

DR. ALFRED P. YANDELL, of Louisville, Kentucky, died suddenly, from angina pectoris, at his home, on the 12th of March, at the age of forty-seven years. He was a graduate of the University of Louisville, where he was graduated in 1857; after the war he studied in Europe. He was physician to the City Hospital and Professor of Principles and Practice of Medicine in the medical department of the University of Louisville. He was senior editor of the *Louisville Medical News*, and a prominent member of the American Medical Association and of other scientific and medical organizations. Dr. Yandell was an able and pleasing lecturer, possessing a vigorous, incisive style both in writing and in speech. His numerous friends will sincerely mourn his untimely taking off. His death was regarded as a public calamity in Louisville, and his funeral was attended by a whole community.

DR. ALFRED L. ELMER died suddenly on the 15th of March, at his residence in Philadelphia, it is supposed from apoplexy, while taking a walk in his garden. He was eighty years of age, and was graduated at Harvard in 1823, and afterwards at the University of Pennsylvania. He never engaged in the practice of medicine, but he retained his interest in medical affairs to the last. His wife had died only a week before his death occurred.

DR. CASPER WISTAR, a graduate of the University of Pennsylvania of the class of 1826, died March 17, at his home in Philadelphia, at the age of seventy-nine years. He had been very successful in practice, and was one of the leading physicians of the city a generation ago, but he retired in 1871, on account of failing health. He had been a Fellow of the College of Physicians since 1848. He was a distinguished writer and lecturer, and was formerly Treasurer of the American Medical Association, of which he had been a member since 1852.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 2, 1884, TO MARCH 15, 1884.

- PERIN, GLOVER**, LIEUTENANT-COLONEL AND SURGEON, Medical Director Department of Dakota.—Leave of absence extended twenty days. S. O. 23, Headquarters Division of the Missouri, March 5, 1884.
- BILL, J. H.**, MAJOR AND SURGEON.—Granted leave of absence for one month. Paragraph 1, S. O. 20, Headquarters Department of the Platte, March 3, 1884.
- BAILY, J. C.**, MAJOR AND SURGEON.—Granted leave of absence for one month, to take effect on or about March 1, 1884, with permission to apply to the Adjutant-General of the Army, through Division Headquarters, for an extension of three months. S. O. 24, Headquarters Department of Texas, February 26, 1884.
- BACHE, DALLAS**, MAJOR AND SURGEON.—Leave of absence extended seven days. Paragraph 1, S. O. 43, Headquarters Department of the East, March 5, 1884.
- BILLINGS, JOHN S.**, MAJOR AND SURGEON.—Granted leave of absence for one month, with permission to go beyond sea, to take effect April 1, 1884. Paragraph 6, S. O. 61, A. G. O., March 13, 1884.
- HEIZMANN, CHARLES L.**, CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended three months. Paragraph 9, S. O. 57, A. G. O., March 8, 1884.
- KNEEDLER, WILLIAM L.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at Fort A. Lincoln, Dakota Territory. Paragraph 3, S. O. 26, Headquarters Department of Dakota, March 8, 1884.
- FISHER, WALTER W. R.**, and **POLHEMUS, ADRIAN S.**, FIRST-LIEUTENANTS AND ASSISTANT-SURGEONS.—Assigned to duty in Department of California.
- STEPHENSON, WILLIAM, BORDEN, WILLIAM C.**, and **CHAPIN, ALONZO R.**, FIRST-LIEUTENANTS AND ASSISTANT-SURGEONS.—Assigned to duty in Department of the Platte.
- ROBERTSON, REUBEN L.**, and **EDIE, GUY L.**, FIRST-LIEUTENANTS AND ASSISTANT-SURGEONS.—Assigned to duty in Department of Texas.
- CROSBY, WILLIAM D.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty in Department of Arizona.
- GANDY, CHARLES M.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty in Department of the East.
- PILCHER, JAMES E.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty in Department of Dakota. Paragraph 4, S. O. 55, A. G. O., March 6, 1884.
- STEPHENSON, WILLIAM**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered to Fort Niobrara, Nebraska, for temporary duty, on completion of which to return to his station, Fort Omaha, Nebraska. Paragraph 4, S. O. 20, Headquarters Department of the Platte, March 3, 1884.
- FISHER, WALTER W. R.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at the Presidio of San Francisco, California, from 18th inst.
- POLHEMUS, A. S.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Winfield Scott, California, from 18th inst.
- S. O. 23, Paragraphs 1 and 2, Headquarters Department of California, February 21, 1884.
- PHILLIPS, JOHN L.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Warren, Massachusetts. Paragraph 2, S. O. 39, Headquarters Department of the East, February 28, 1884.
- BENHAM, R. B.**, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort A. Lincoln, Dakota Territory, and ordered to Fort Sisseton, Dakota Territory, for duty. Paragraph 1, S. O. 22, Headquarters Department of Dakota, February 26, 1884.
- WALES, PHILIP G.**, appointed to be Assistant-Surgeon with the rank of First-Lieutenant, to date from February 7, 1884, vice Brewster, resigned. Memorandum, A. G. O., March 10, 1884.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM MARCH 1, 1884, TO MARCH 15, 1884.

- P. A. Surgeon H. E. AMES**, from the "Colorado" and ordered to the Greely Relief steamer "Bear."
- P. O. Surgeon F. H. TERRILL**, to Coast Survey steamer "Hassler."
- P. A. Surgeon R. H. MCCARTHY**, from the Coast Survey steamer "Hassler," and wait orders.

PHILADELPHIA, APRIL 5, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE ON THE PROGNOSIS IN CHRONIC BRIGHT'S DISEASES.

Delivered in the Philadelphia Hospital

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine, University of Pennsylvania; Lecturer on Pathology, Women's Medical College, Philadelphia.

THE question of prognosis in renal diseases, in common with similar questions in other forms of disease, is often vague and unsatisfactory. The three cases which I present to-day illustrate chronic forms of Bright's diseases, and I desire to use them to teach the paramount importance of the diagnosis of the cardiac and arterial changes in the prognosis of chronic Bright's diseases.

Physical examination reveals, in each instance, marked hypertrophy of the left ventricle of the heart; and the sphygmographic tracings show the oblique percussion-stroke, with its rounded apex, indicative of an increased arterial tension. The frequency of arterial and cardiac changes in the interstitial renal process is acknowledged on all sides. Dickinson places the proportion of cases in which the left ventricle is hypertrophied at thirty-one out of sixty-eight cases; Traube, at ninety-three out of one hundred; and Grainger Stewart says that, at a somewhat advanced stage, it is never entirely absent.

The parenchymatous forms of nephritis commonly pass through three stages: (1.) Stage of inflammation more or less pronounced. (2.) Stage of fatty transformation, which is more or less rapidly produced, since it may be developed in a few weeks or may continue for years. It is accompanied by a less diffuse and subacute form of inflammation than in the first stage. (3.) Stage of atrophy, presenting the smooth, granular, fatty kidney, more or less closely resembling the contracted interstitial kidney.

In certain cases of parenchymatous nephritis, hypertrophy of the heart also prevails; especially in those which have become chronic. An idea as to the relative frequency of hypertrophy of the heart in this condition of the renal substance can

be obtained from the writings of Grainger Stewart. He found hypertrophy of the heart present in only twelve per cent. of cases fatal in the first stage, thirty-eight per cent. of those fatal in the second stage, and one hundred per cent. of those fatal in the third stage. The hypertrophy of the heart is not nearly so frequent in the early stages. This may be explained by the great losses of albumen in cases at this time, by which their nutrition is profoundly affected and the nutrition of the heart equally so with the other organs.

Together with the hypertrophy of the heart there exist in chronic renal diseases certain arterial changes, representing arterial thickening due to an increase in the two outer coats of these vessels, which condition is often succeeded by atheroma. To make the proposition relating to the cardiac hypertrophy and vascular thickening apply to cases in general, we may say that both are due to capillary resistance and are consequences rather of chronic renal inadequacy, however produced, than belonging to any definite type of renal disease.

The frequency of cardiac and arterial lesions being conceded, we may appreciate their value in prognosis when we consider that the activity of other eliminative channels is dependent very largely upon the perfect performance of the circulation. The thorough elaboration of the food in the intestinal canal and liver is dependent upon the activity of the portal and mesenteric circulation. Indeed, the function of the liver is especially important in nutrition, since the discharge of imperfectly elaborated albuminoids through the hepatic vein is a potential cause of deterioration of the blood-tissue, and prepares the way for the development of uræmia. This condition is one in which the interchange of the nutritive elements of the blood with the waste elements of the tissues and their mutual replacement is seriously compromised. The nutrition of the cardiac muscle is among the first to be affected, and through cardiac failure the nutrition of the tissues in general becomes undermined. The importance of perfect cardiac nutrition in chronic renal disease is therefore manifest.

Probably the prognosis of chronic interstitial nephritis is especially involved in the question of the cardiac nutrition, since

all observers are agreed that failure of cardiac force may suddenly precipitate an attack of uræmia. But in chronic forms of nephritis with associated and parenchymatous changes, or in chronic parenchymatous nephritis, even waiving the question whether there is, in all chronic cases of long duration, a tendency to contracted kidney, the condition of the heart will prove the determining factor in diagnosis. In comparatively reviewing the general basis for prognosis in chronic forms of nephritis, one must consider the character of the other data upon which a prognosis may be based. The chemical quantitative examination of the urine for urea is important, but a compensative activity of the circulation will obviate the imperfect renal secretion, and the cardiac nutrition is sensitive to prolonged reduction in the activity of renal circulation.

The microscopical examination of the urine for casts as evidences of renal alterations is very significant, but the deductions from these are obviously most correct when considered together with the cardiac condition. In this way, in interstitial nephritis, the duration of the disease may be estimated, and mistakes due to inferences drawn from the presence of casts can be avoided, since recovery from renal disease has occurred even when casts indicative of the second stage of parenchymatous fatty degeneration have been found. The activity of the digestive system is an element in the prognosis, but this also depends on the efficiency of the mesenteric circulation. The stage and date of the disease also bear close relation to the prognosis, and should be studied in connection with the cardiac nutrition.

While the foregoing remarks must be regarded as general rules, remember that prolonged insufficient cutaneous activity, or acute exacerbations of renal mischief, or intercurrent processes in other organs, may at any moment place a period to the life of a patient. Therefore a prognosis on any form of chronic Bright's diseases should always include an "other things being equal."

The symptoms and complications calculated to alarm one in any form of Bright's diseases are suppression or diminution of the urine, nervous phenomena, unmanageable dropsy, chronic manifestations of uræmia, acute inflammation, and hemorrhages. Albuminuric retinitis is always a

serious symptom, occurring most frequently in cirrhotic forms of nephritis. In a recent paper read before the Philadelphia County Medical Society by Dr. W. S. Little, it was stated that among nine hundred and eleven cases of Bright's disease, reported by different observers, changes in the retina had been recorded in one hundred and eighty-five, or about twenty per cent. He continues, "Can a prognosis as to the duration of the disease, or as to its fatality, be derived from the eye-symptoms? Only in chronic states of the disease, where retinal hemorrhages are extensive and repeated, the heart being diseased. Brain-symptoms soon follow in these severe types of retinitis in chronic kidney-disease, a general hemorrhagic condition being developed, or uræmia may ensue. In the acute form of Bright's disease no prognosis of any value can be formed from the eye-symptoms, though severe."

I would add that an exception to the commonly serious character of albuminuric retinitis should be made in favor of pregnant women.

Finally, the progress of arterial lesions as associated with the cardiac lesions must be analyzed, especially to discover the presence of atheroma. These arterial lesions affect the cardiac nutrition by reducing aortic systole, and so interfering with the circulation through the coronary arteries. The progress of these changes can be successfully studied with the sphygmograph. Tracings should always be taken in chronic Bright's diseases, and the increase of arterial tension proportionate to the cardiac hypertrophy is a favorable sign, too high a grade unfavorable, indicating the surcharged state of the blood with unreduced albuminoids. The decrease below the standard is extremely unfavorable, since it is the precursor of degenerations and the harbinger of the various complications which terminate the clinical history of these cases. With the above facts in mind, our prognosis may stand as follows:

Parenchymatous nephritis is often quickly dangerous, but if a case survive the initial periods the prognosis in the early stages is less unfavorable to ultimate recovery than in the cirrhotic form. In the second stage, representing the stage of fatty transformation, recovery, though rare, is possible. The patient may survive

for a long period, although at any time death may ensue from sudden or gradual increase of the symptoms, or from intercurrent affections. In the third stage (*i.e.*, that of atrophy) the deterioration of general health renders the prognosis most unfavorable, yet even in this stage, if the cardiac nutrition be good and suitable hygienic and therapeutic conditions be fulfilled, life may still be prolonged for considerable periods. In the forms of renal disease cirrhotic from the outset, the progress of the disease is slow and insidious and the fatal result long deferred, yet the disease may be considerably advanced before it is detected, and the cardiac and arterial lesions materially assist us in approximating the stage of the process and its duration.

In conclusion, let me notice the sometimes favorable prognosis and short duration of attacks of subacute catarrhal nephritis occurring independently of scarlet fever in children. Recent publications in the English journals have called attention to such cases. They occur most often in children who suffer from enlarged tonsils and catarrhal tendencies. In such cases the ordinary symptoms of reduced urinary secretion, dropsy, etc., prevail; the urine is albuminous, and contains casts, without blood. All the symptoms may vanish in two to four weeks, and convalescence ensue, if appropriate treatment be instituted and favorable hygienic conditions exist.

ORIGINAL COMMUNICATIONS.

THE BACILLUS TUBERCULOSIS AND THE ETIOLOGY OF TUBERCULOSIS.—IS CONSUMPTION CONTAGIOUS?

— SECOND COMMUNICATION.

*Read before the Philadelphia County Medical Society,
November 14, 1883.*

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(Continued from page 454.)

VI.—EXPERIMENTS AND EVIDENCE, "PRO" AND "CONTRA."

IT has been shown that the clinical evidence in reference to the contagiousness of phthisis is so meagre that assertions as to its parasitic origin are unwarranted (see chap. iv.). Moreover, statistics negative

such theory. This being the case, it would seem as if experimenters are trying to prove that which is not the reality.

The testimony of the defenders of this theory, however, appears strengthened since the publication of the discovery of the bacillus and of the experiments of Koch. This is to be in a measure explained by the impression which Koch's well-constructed article made upon the minds of some of our leading clinical teachers, who involuntarily felt themselves induced to teach and to write about the doctrine of the contagiousness of phthisis. The profession at large does not care for Koch's discovery, whatever its value may be; but the opinion of the leading clinicians endorsing such discovery forms a guide, and may prove one of the most efficacious means of influencing the profession in regard to the question of the contagiousness of phthisis.

Having arrived, from my own experiments, at conclusions different from those of Koch, I thought it at present timely to announce at least the results of my observations, as my detailed report cannot appear for some months to come. It is my personal observations, together with my conclusions obtained from a careful perusal of the control experiments and of the records of the observations of others, which have determined my present attitude in the question of the etiology of tuberculosis.

The total evidence *pro* and *contra* gives me the impression that the doctrine of the contagious character and parasitic causation of tuberculosis cannot be sustained.

I will now submit a brief analysis and summary of experiments made and evidence offered in relation to the question of the parasitic origin and specific nature of tuberculosis.

For the establishment of a theory in regard to a parasitic origin of a disease by means of experiments on animals, etc., the following propositions must be affirmatively decided:

1. The disease produced experimentally in animals by means of inoculation with products of the human disease must be proved to be identical with the disease occurring spontaneously in man.

2. There should be some evidence showing that inoculation in man is followed by the same results as follow the inoculation of the same material in animals, and that the disease is really contagious.

3. There must be found a definite parasite at the beginning of the diseased process in all cases and in all tissues involved by the disease, and in sufficient quantity to account for the changes.

4. Given a parasite that is the cause of the disease, its action should be specific, —i.e., it alone should be the causative factor, and should, when isolated and inoculated into an animal liable to the disease, always produce that disease.

5. The lesions of a disease resulting from the inoculation of a specific parasite must also contain that parasite and the specific properties of reproducing the same disease when re-inoculated.

6. Finally, a given parasite and no other substance should, the conditions remaining the same, be capable of producing the disease.

Koch makes an effort to answer all the above propositions in the affirmative in reference to tuberculosis. As a thorough and experienced mycologist, he knew well that this is unavoidably necessary in order to establish the etiological relation of his bacillus to tuberculosis.

Tuberculosis was known before Koch to be inoculable, and was, upon popular notions and traditionally, regarded by some as a contagious disease. Taking such theory for granted, it was necessary to find the parasite. In fact, Klebs, Tous-saint, Max Schüller, and Aufrecht made excellent investigations, which even suggested the parasitic nature of tuberculosis, although the proofs offered by these investigators were not sufficient.

Koch's investigations, with his superior advantages, methods, and diligence, have been crowned with better success, and have brought forward facts of standing and permanent value to mycology, botany, and partly to medicine. His evidence in the question of the parasitic nature of tuberculosis is strong, but his conclusions from this evidence were overdrawn and too hasty. They are, thus far, not so much justified as he and his followers think they are. There is great lack of that absolute proof that is necessary for the settlement of a question of such magnitude and social importance.

Koch has, in relation to tuberculosis, brought forward definite affirmative proof for only some of the above-stated propositions, and this, again, *only partial*. Valuable contributions to this end have been

also made by others. But we must have *full proof for each and all* of those propositions, and these must be really applicable to tuberculosis, before we can accept the theory of a parasitic character and of the contagiousness of this disease.

Submitting, now, a brief criticism of the bacillus theory of Koch and his followers, I will take up separately each of the above-stated propositions, all of which it is necessary to prove in the affirmative before there is any reason for the establishment of such a theory in regard to tuberculosis.

1. *The disease produced experimentally in animals by means of inoculation with products of human disease must be proved to be identical with the disease occurring spontaneously in man.*

In favor of the identity of human tuberculosis with that produced experimentally in animals there has been brought forward the fact that the products in both contain identical bacilli. But this surely does not prove the identity, because similar bacilli may be found in the lesions of various kinds of processes, resulting in cheesy products. (See bacillus chapter.) Besides, there are many spontaneous and artificially-induced tubercular lesions in which bacilli could not be demonstrated. Hence we cannot rely upon the bacilli as a proof for the identity of the lesions.

Koch and those who imitated his experiments diagnosticate and declare all those artificially-induced lesions as tubercular which occur in nodes and in which they found the tubercle-bacillus, without taking (so far as I know) into consideration any structural peculiarities or other conditions. Now, tubercle-bacilli will surely be found in the lesions, whatever these may be, as they were introduced into the animal in those experiments. Further, in the opinion of these gentlemen nothing is tubercle where there are no tubercle-bacilli. Therefore, how can we rely upon their statements as to what the lesions they induced in animals really were?

It is hardly within the province of the mycologist to teach us what is tubercle and what is not tubercle.

Tuberculous lesions with extensive cheesy changes and tissue-destruction, cavities, etc., such as occur spontaneously and often quite speedily in man or animals, cannot be induced experimentally by means of inoculation, unless very large

quantities of some purulent tuberculous materials are used, and abscesses result. When an animal dies several or many months after the operation of natural tuberculosis, extensive caseation of the organs may occur.* The only kind of induced or artificial tuberculosis in animals which may be ascribed to the effects of inoculation is one that corresponds in naked-eye appearance to secondary miliary eruption of tubercle as occurring in man,—the acute miliary tuberculosis. This acute miliary tuberculosis in man, which I observed also in animals as a spontaneous disease, occurs only in wasting diseases accompanied by various grave symptoms, anæmia, and great emaciation; while the induced disease in animals occurs suddenly, and induces no symptoms, no blood-changes, no emaciation, etc.

In many instances where the experimenters have produced, by means of tuberculous materials, within two to eight days after the operation, a miliary eruption, it is not probable that those miliary nodes were tubercles, and were due to the effects of bacilli, which are known to grow extremely slowly, and it is not certain that the experimenters took pains to distinguish them from true tubercle, or were competent in all instances to do so. This is eminently true of the inhalation tuberculosis.

Tappeiner's induced inhalation tuberculosis of dogs,† so much relied upon by Koch and others for the establishment of the mode of the spreading of phthisis, and partly of the bacillus doctrine itself, has been proved to be a fiction. Tappeiner, as so often quoted, subjected dogs to an atmosphere heavily charged with phthisical sputum, so that the dogs were nearly bathed in the latter (known to contain bacilli) for weeks. But, in spite of this, the animals grew fat, if anything, and, after the lapse of a certain time, acquired local pulmonary affections in the form of nodules, not likely to have been tubercular in nature, of which only in one case were some observed in the liver and kidneys.

The experiments of Schottelius,‡ War-

gunin and Rajewsky,§ Weichselbaum,|| and of others,¶ and my own experiments also (to be reported subsequently), make Tappeiner's assertions perfectly untenable. Tappeiner's own account of his experiments and the microscopical description of the structure of Tappeiner's "tubercles" by Grawitz and Friedlander in Virchow's institute clearly indicate that he had nodular broncho-pneumonic foci, and not tubercles. (See explanation of these formations in the first chapter of this paper.)

I will, however, show later that pulmonary tuberculosis may occasionally be produced in rabbits by these means.

Furthermore, the bacillus theorists assert that inoculation-experiments, and these alone, can prove the tubercular nature of the nodular eruptions obtained artificially in animals. The identity with human tubercle is considered established, because inoculation nodes from the animal and tubercles of man act alike. They claim that whatever can produce tubercle on inoculation contains the tubercular virus, and is tubercle. Under such conception, finely-powdered sterilized glass should be classed with tubercle, because it, as I can reaffirm now, is capable of inducing tuberculosis when introduced into the tissues of healthy animals.

The following deserves a passing mention. According to Orth** and Bollinger,†† there is some doubt as to the identity of human and animal tuberculosis. The results of the experiments of both these observers show that tuberculosis could only be induced by feeding animals with materials from animal tuberculosis; while tuberculous materials taken from man had no effect upon animals when given as food. On the other hand, the Würzburg feeding experiments upon man‡‡ prove that animal tuberculous materials have no effect on man.

Although, judging from my own experiments, there is to my mind no doubt that some forms of artificially-induced tuberculosis in animals acquire gradually characters which make them identical with the

* I was much surprised last summer to see in Berlin, at the Hygienic Exhibition, in Koch's pavilion, specimens of the character just stated exhibited as inoculation-tuberculosis, and still more to hear the demonstrator explain (surely without being authorized by Koch) that these specimens were to demonstrate the rapid effects of the bacillus.

† Virchow's Arch., lxxiv., 1878, and *ibid.*, lxxvii., 1880.

‡ Virchow's Arch., lxxii., 1878, and *ibid.*, xci., 1883.

§ Vratsch, No. 6, 1882.

|| Centralblatt, No. 19, 1882.

¶ To the same conclusion, I hope, will also come my esteemed friend Prof. Brose, if he repeats his experiments published in the Medical Record, January, 1884.

** Virchow's Archives, vol. lxxvi.

†† Arch. f. Exper. Path., vol. i.

‡‡ Schottelius, loc. cit.

spontaneous tuberculosis in man or beast, yet I do not think it is at all proved that the lesions so rapidly arising from the effects of the inoculation with the bacillus of Koch are identical with tuberculosis in man. The proof, then, upon this point, the supreme one for the settlement of the question of the nature of tuberculosis, is yet to be furnished.

2. *There should be some evidence showing that inoculation in men is followed by the same result as follows the inoculation of the same material in animals, and that the disease is really contagious.*

In favor of the direct inoculability of tuberculosis in man the following is presented:

At a recent meeting of the Académie de Médecine, M. Verneuil related the following history. In July, 1877, a house surgeon (*interne*) at the Ste. Eugénie Hospital, who performed all the post-mortem examinations, one day noticed a papule at the base of the nail of his third finger. The apex presented a white spot, and a few drops of pus escaped from it. It was frequently cauterized, but the phalanges became attacked, and a cold abscess spread over the back of the hand. After three years' treatment, having failed to produce any improvement, M. Verneuil amputated the finger. The house surgeon was believed to be cured, and practised in the provinces. Quite recently he has been again attacked by cold abscesses in the lumbar region, causing intense pain; during violent attacks of pain the arms exhibit clonic convulsive movements. M. Verneuil has operated a second time. He is convinced that his patient became inoculated with tuberculosis when performing a necropsy. A similar misfortune happened to Laennec. One day, when operating on a tuberculous patient, he slightly cut himself with a saw. A swelling appeared on the wounded part. Laennec cauterized it with antimony chloride. The swelling disappeared, but twenty years subsequently he died from tuberculosis.*

We have seen that clinical evidence and statistics do not elucidate a contagion for tuberculosis, and that the few isolated instances of apparent contagion offered cannot stand the test of scientific scrutiny. An infectious or contagious disease can have only one cause, and cannot be at

one time due to a contagion and at other times arise from a variety of causes: hence the latter part of the proposition must be answered in the negative.

This being the case, the *parasitic* origin must also be denied it, as a necessary consequence.

As to the first part of the proposition, too little is known of scientific observation upon this point in regard to tuberculosis. According to the exhaustive investigation of Dr. Law,† there is no evidence that tuberculosis has ever been conveyed through vaccination.

I must mention, though, an actual inoculation-experiment upon man, not so much on account of its inherent value, as because it has been quoted with great reliance in support of the infectiousness of tuberculosis. Demet, Paraskeve, and Zallonis, in Syra, Greece,‡ “inoculated a man of 55 with tubercle. He was suffering from gangrene of the left great toe, due to the obliteration of the femoral artery, and his death was inevitable, as he had refused to submit to amputation. His lungs were carefully examined and found to be sound. They inoculated the upper portion of the right leg with sputa from a man who had abscesses in his lung. Three weeks later there were signs of commencing induration at the summit of the right lung. The patient died on the thirty-eighth day after the inoculation, from gangrene. At the necropsy there were found at the apex of the right lung seventeen small tubercles, varying in size from that of a mustard-seed to that of a lentil. Two similar tubercles were found in the left apex, and two others in the liver. The experimenters concluded that the embryonic state of the tubercles and their limited number were due to the short time since the inoculation.”

This isolated experiment, as well as any of the experiments on animals, is valid only when we take it for granted that the experimenters are able to differentiate spontaneous from artificially-induced tuberculosis. This is not probable in the case just quoted. We are told that the man experimented upon was suffering from an exhausting disease, and it is well known that at least one-third of the autopsies in such cases reveal tubercular disease.

* National Board of Health Bulletin, No. 40, 1882.

† Paris Correspondence of the British Medical Journal, quoted by Boston Med. and Surg. Journal, No. 10.

‡ Quoted by Med.-Chir. Review, October, 1874, from Gazette Médicale, 1872, page 192.

Directly bearing upon the proposition under consideration are again those Würzburg feeding-experiments, in which material known to be infested by tubercle-bacilli was used, often raw, for years as food, under strictly scientific supervision, with absolutely negative results, and which tended to show that man does not react at all upon the tubercle-bacillus.

3. *There should be found a definite parasite at the beginning of the diseased process, and in sufficient quantity to account for the changes in all cases and in all tissues involved by the disease.*

In relation to tuberculosis this proposition cannot be answered in the affirmative; and it is by no means as definitely settled as some high clinical authorities hold with Koch, that there is but one "specific parasite" in tuberculosis.

Klebs,* Toussaint, and Schüller† have observed *micrococci* to be constantly present in tuberculous lesions and products (and have induced artificially the disease with the isolated micrococci), and no one has *proved* anything to the contrary; while Koch and Baumgarten‡ discovered *bacilli* in the same lesions. Koch claims for his bacillus more than is consistent with the laws of physiological and pathological life and sound argumentation, and more than is in correspondence with the actual proofs offered in relation to the pathogenetic properties of this bacillus.

The reports of some competent microscopists and pathologists (when the originals are examined) show that the tubercle-bacillus is not invariably present in all cases and all products of tuberculosis; and, if present, it is often not seen in sufficient quantity to ascribe to it the claimed significance; and, furthermore, it is, as a rule, not present in the beginning of the disease. On grounds of personal investigation I can offer similar testimony.

The bacilli should be present in every lesion and in all cases and in the beginning of tubercular disease, and not chiefly in its degenerated products, if tuberculosis is to be called a parasitic disease, in accordance with the laws of pathology. In all well-established parasitic diseases the parasite is a necessary factor and is invariably

present,—unless there should be established for the "tubercle parasite" an exceptional, new, and mysterious mode of action.

The truth of the matter appears to be, and, indeed, from my daily observations in the laboratory upon a large quantity of material, I regard it as a fact, that the tubercle-bacillus of Koch is a mere concomitant of cheesy disintegrated materials, even if it be pre-eminently of tuberculous cheesy materials.

4. *Given a parasite that is the cause of a disease, it should, when isolated and inoculated into an animal liable to that disease, always reproduce that disease; but its action should be specific,—i.e., it (the parasite) alone should be the causative factor.*

There is no doubt that Koch's tubercle-bacillus when isolated and cultivated for many generations and then inoculated into certain animals is capable of inducing tuberculosis, or a nodular eruption not distinguishable from it, more readily than other irritants, so far as tried. Success in inoculating is particularly frequent in rabbits and guinea-pigs (although not so common as Koch claims), but only conditional and rare in other animals.

Thus it appears that the above proposition could be answered for tuberculosis and the bacillus in the affirmative if only the following points were proved:

1st. That the nodular lesion thus induced is really tuberculosis, identical with the human disease.

2d. That this bacillus is the only bacterium or the only irritant capable of inducing tuberculosis; and,

3d. That its action is specific,—i.e., that the bacillus is the only agency or factor at work, the sole cause of the disease.

The first point is not proved, as probable as it may appear. The other points are open to the following considerations and objections:

It has been proved that in tuberculosis micrococci, as well as bacilli, are causal, the evidence being "strong" for either "parasite;" whereas the bacillus alone should be the causal factor. As long as not *disproved*, Klebs's, Toussaint's, and Schüller's investigations (in relation to the micrococci as causal factors) have as much claim as Koch's. The method of cultivating those tubercle-micrococci, as practised by those investigators, was one not favorable for the development of the tubercle-bacilli. Further, Watson Cheyne's

* Klebs now admits the bacilli, but denies that they are invariably present, and denies on grounds of experiments their exclusive pathogenetic properties, although he admits that they are a not unimportant admixture to his micrococci.

† Loc. cit.

‡ Loc. cit.

assertion that bacilli *must have been* present in the cultured materials with which those investigators inoculated successfully, is altogether a gratuitous assumption, and his few and imperfect control experiments with Toussaint's micrococci were not satisfactory, and, in fact, neither prove nor disprove anything.* Koch did not try the effects of any other fungus than that of his bacillus in relation to tuberculosis.

Koch further claims that the specific character of his bacillus is supported by the rapidity of its effects, and brings forward the inhalation experiments of Tappeiner and the experiments upon the eye. The former I have shown to be valueless, as those nodules produced in the lung, especially if rapidly formed, are not tubercles. I have also reason to believe that the same is the case with many of the experiments on the eye, especially in those cases in which an apparently acute miliary tuberculosis of the lung rapidly followed the inoculation: in fact, in some instances this eruption occurred in a much shorter time than is at all possible for tubercles to develop.

Koch has not proved that his bacillus is the only agency at work in the production of tuberculosis. Although he undoubtedly inoculated the pure bacillus, he ignored the specific reaction of the soil; and it is the latter which I hold plays the most important rôle in determining the formation of tubercle. In introducing the bacillus into the animal organism, another factor—the injury inflicted, and its effects upon the living cells of the body—must be taken into consideration.

In some animals all the tissues of the body react equally upon the introduction of irritants; in others only some one of the tissues responds, such as the serous membranes. This surely demonstrates the specific action of the soil.

I must again call attention to the fact that in making his experiments Koch injected the bacilli into any part indiscriminately in scrofulous animals, while in non-scrofulous animals (dogs, rats, cats) he injected them only into the peritoneum or the anterior chamber of the eye, where, we know from experience and from repeated experiments, any irritant of sufficient intensity may create tuberculosis.

This cannot be explained by the assump-

tion of Koch that the bacillus must merely be enclosed in something so as not to be eliminated before it can exert its effect.

To me it appears that the reason why we must inoculate in serous cavities to produce tuberculosis in the dog or cat, is, because we want not so much the specific action of the irritant (say of the bacilli) as the properties of the serous membranes. It is now well known that any chronic inflammation of serous membranes may lead to primary tuberculosis. It is proved that we do have a primary tubercular synovitis or a primary tuberculous pericarditis; and that bacilli could be instrumental in its production is highly improbable.

In surface tuberculosis like that of the lung the bacilli, in my opinion, also play only a secondary rôle.

Koch himself admits that it is not likely that the bacillus when inhaled by man could get a foothold in a normal lung. He says distinctly in his original articles that the lung must be predisposed for the reception and the action of the bacilli. Under such predisposition he understands and enumerates the following lesions: "*desquamation of the epithelial lining of the respiratory tract, stagnating exudates and secretions in the lung, adhesions, anomalies of respiration,*" etc. Now, here is a matter of mere interpretation of these lesions. Koch innocently calls them "predispositions," while every pathologist will designate some of these lesions as suggesting already-existing pulmonary phthisis. In fact, at the present standing of our knowledge of pulmonary phthisis we can have no desquamation of the vesicular epithelium without preceding tubercular infiltration.

Watson Cheyne is also considerate enough to say,† " . . . it seems to me that the lung must in addition be prepared for the reception of the bacillus, as may be the case if congestion or slight inflammation be present at the time of the inhalation of the organism."

That in inoculations into serous cavities the latter do not act merely in preventing the bacillus from escaping or being eliminated, and that the stagnating secretions in the lung do not act merely as a glue to retain the bacillus in order to allow the accomplishment of its effects, is, to my mind, proved by the following experiments of

* See Watson Cheyne's report, *Practitioner*, April, 1883, pp. 272-276.

† Loc. cit., p. 314.

Bollinger. Bollinger,* in order to show that tuberculosis could not be transplanted by vaccination, made superficial *cutaneous* inoculation in rabbits with tuberculous materials with negative, and deep *subcutaneous* inoculations with the same material, followed by intense inflammation, with positive results. In both cases the wounds were covered by a layer of collodion to prevent the "elimination" of the bacillus.

Thus it appears that the bacilli by themselves have no effect upon the healthy organism or the normal tissues. A predisposed soil is the chief factor and is pre-eminently necessary for the production of tuberculosis; while, on the other hand, it is not proved at all that the bacillus is invariably necessary for the production of tuberculous lesions. Although the tubercle-bacillus is more liable to excite tuberculosis in an already inflamed and ill-nourished soil than all other simple irritants so far tested, it (the bacillus) might be readily substituted by other irritants.

The matter must unquestionably be tested further, but from the above evidence it is clear that a general fear of the bacillus tuberculosis as a contagion is unjustifiable, and that the ordinary dust suspended in the air is to certain persons as dangerous as the bacillus.

5. *The specific lesions of a disease resulting from the inoculation of a specific parasite must also contain that parasite, and have the specific properties of reproducing the same disease when re-inoculated in other animals.*

Koch claims that the products obtained in animals by inoculation with bacilli are capable of producing tuberculosis when inoculated into a second animal, while the products obtained by inoculation with innocuous substances do not have this effect. The former proposition is true, but the latter, I hold, is not in accordance with facts. In my own experiments, to be detailed in my forthcoming report, tubercles produced by inoculation with innocuous material under antiseptic precautions were likewise capable of producing tubercles when inoculated into other animals, having thus the same action as the innocuous material primarily used.

I have also shown above (see bacillus chapter) that in secondary tuberculous products bacilli may be absent.

The experiments of Martin,† which tend to show even the progressive virulence of products obtained from re-inoculation with tuberculous material in a series of animals, have been substantiated by no one.

Martin's assertion also, that inoculations with products obtained by the introduction of innocuous substances never produce true tuberculosis, and that after a series of re-inoculations these products lose their power of acting even as local irritants, is, according to control experiments, positively wrong. On the other hand, views have been expressed, based upon experiments (I think also by Martin), that products obtained by inoculation with non-tuberculous substances when re-inoculated may gradually become specific, and increase in virulence in producing tuberculosis.

6. *Finally, a given parasite and no other substance should, the conditions remaining the same, be capable of producing a parasitic disease.*

In my previous studies, judging from the literature alone, I was fully impressed with the idea that tuberculosis had a specific exciting cause, and that it could be induced by inoculation with tuberculous materials. Moreover, having made numerous inoculations with tuberculous matters, I convinced myself of this fact. Hence I accepted the view that tuberculosis is inoculable in certain animals.

But, at the same time, after repeating, under various modifications, the well-known control experiments, I found that, beyond doubt, even true tuberculosis could be induced by substances other than tubercular, and that failures to induce tuberculosis with tuberculous materials were in certain animals nearly as common as successful inoculations with innocuous substances.

To these experiments I will return in my forthcoming report.

It will be also necessary to first consider the evidence of those observers who, from the results of their own exhaustive experiments, negated the exclusive or specific infectious properties of tuberculous materials. This negative evidence is by far more voluminous and strong than the admirers of the hypothesis of the contagiousness of tuberculosis suppose; excited admirers having especially arisen

* Zur Aetiologie der Tuberculose, Prager Med. Wochenschrift, Nos. 4 and 5, 1884.

† Journal d'Anatomie et de Physiologie, April, 1881.

since the ingenious article of Koch appeared.

It is, however, remarkable that some of the writers on tuberculosis fail to understand that the pivot of the question of the etiology of tuberculosis does not rest upon the fact alone whether or not the bacillus induces lesions analogous to tuberculosis, but pre-eminently upon the fact whether innocuous substances have or have not the same effects.

Thus, above all, the negative evidence must be carefully inquired into, not by relying upon the crippled and sometimes misrepresenting and meagre quotations of some of the compiling writers, but by submitting the original communications of the authors and experimenters to a careful perusal.

Together with the accounts of the much-quoted experiments of investigators who succeeded in inducing tuberculosis in animals with tuberculous substances only, the reading and thorough examination of the records and results of experiments of the observers to be mentioned below are unavoidably necessary.

The following observers all refer to many or few experiments of their own in which tuberculosis resulted from the inoculation with either innocuous substances or with specific matters other than tuberculous:

- Lebert, *Allgem. Med. Central-Zeitung*, 1866.
 Lebert and Wyss, *Virchow's Archiv*, vol. xl., 1867.
 Empis, *Report of the Paris Internat. Med. Congress*, 1867.
 Burdon Sanderson, *British Med. Journal*, 1868.
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* Hänsell, who inoculated animals with gummous growths and syphilitic pus, obtained an exquisite miliary tuberculosis from the effect of these substances. In this connection may also be mentioned the following:

Damsch (*Centralbl. f. Med. Wissen.*, July 21, 1883), who obtained tubercular eruptions and nodes in the brain in rabbits

Some of the observers enumerated did not consider the miliary eruptions obtained experimentally as true tubercles, but the majority did so, and, as I will show later, presented excellent and reliable experiments and sound reasoning in support of their views.

Shall all the above evidence go for naught merely because Koch has discovered a bacillus which is capable of inducing in animals lesions resembling tuberculosis?

I trust it will not. Koch has, so far, no authority to claim *exclusive* pathogenetic properties for his bacillus, as he made himself no satisfactory control experiments with substances other than tuberculous. The few control experiments he offers, viz., that *sterilized* blood-serum (!), tuberculous material soaked in alcohol, and fresh scrofulous glands, or pus from tuberculous lesions, did not induce tuberculosis, prove little or nothing in favor of his bacillus.

Watson Cheyne, in his excellent report, displayed great care, diligence, and skill in his experiments and observations intended to corroborate Koch, but in making his control experiments he likewise was not very particular. So in relation to inoculations with non-tuberculous substances he came to the conclusion that "not one of the twenty animals (inoculated with innocuous substances) became tuberculous"! But when the detailed account of Watson Cheyne's experiments is read over, it is amusing to learn that only nine out of the twenty-five supposed negative experiments were really known to be negative, because eleven of the rabbits experimented upon had been stolen before Cheyne had a chance to examine them, two rabbits died within a few days, or long before tubercle could develop, and in three rabbits the experimenter really records lesions that might have been tuberculous, in spite of the absence of ba-

through inoculation into the eye with the cultivated bacilli of leprosy. Similar inoculation with leprosy material led to a perfect miliary tuberculosis in rabbits in the hands of Kaposi, of Vienna (*Wiener Med. Presse*, January 21, 1883).

Pfeiffer, Dontrepoint, Cornil and Babès (*loc. cit.*) had the same experience with lupous material.

Bodamer (Inaugural Thesis, Univ. of Penn., 1884) had, as the result of inoculating with the pure cultivated actinomyces fungus, a striking general miliary tuberculosis in rabbits.

Inoculation with materials from glanders gives also rise to tubercles in the lungs, etc., not distinguishable under the microscope from true miliary tuberculosis. But Löffler, who kindly demonstrated to me this fact in Koch's laboratory, and who also gave me a specimen demonstrating it, explained that the nodules in the lungs were not tubercle, because the bacilli found therein behave differently in staining.

† *Loc. cit.*

cilli in them, which latter circumstance, however, induced him to call the result a negative one.

These are instances of the way in which experimenters with preconceived and peculiar ideas upon a subject may unconsciously be misled in forming conclusions from their own experiments.

Further, it is interesting to note that in the "classical" experiments of Solomonson,* Baumgarten,† Tappeiner,‡ etc., among other substances, the following materials were used extensively for control: "caseous glands from scrofulous child," "caseous material from various sources," "muscle, testicle, and kidney from tuberculous guinea-pig," "cheesy pus from man and animals, cheesy infarcts, caseous tumors," etc. All these substances, which are known usually to contain the bacillus, were inoculated while fresh into animals, and are recorded by the experimenters above stated as having failed to produce tuberculosis. This is surely not consistent with the doctrine of Koch.

Wherever inoculation with innocuous substances was followed by positive results, the over-zealous germ-theorists call it "*accidental tuberculosis*." They say that at the time of former experiments the communicability of tubercle by a mediate contagion was not recognized, and as the precautions necessary for thorough disinfection of instruments, surroundings, etc., were probably not observed, the channels for the introduction of the *bacillus* were in all previous experiments left unguarded: hence, they argue, *it must have been* this ubiquitous bacillus which induced the tubercle.§

* Aftryk fra Nord. Med. Arkiv, vol. xi., 1879.

† Loc. cit.

‡ Loc. cit.

§ In this connection the following incident is interesting, particularly on account of the high authority of the observer:

Some experiments were made under the supervision of Virchow (*Berlin. Klin. Woch.*, 1880), principally with the view of testing whether the milk of animals affected with "pearl-disease" or bovine tuberculosis could reproduce the disease when fed to other animals. Virchow's own objection to experiments of this kind is that the various chronic inflammatory processes which occur spontaneously in animals are not sufficiently well known even to veterinary specialists. Further, in pigs, which he used in considerable numbers, scrofulous glands occur so frequently, from their alliance to man through their omnivorous habits, and their detection during life is a matter of such great difficulty, that results founded upon their presence must be accepted with great caution. The possibility of coincidence was also well illustrated by two cases in which several animals were found to be tuberculous after having taken the milk for some time from a cow which was diagnosed during life as affected with bovine tuberculosis, but whose lungs were found at the autopsy filled with echinococcus cysts, and with no trace of tuberculosis.

The milk of another animal which subsequently was found to be profusely affected by bovine tuberculosis had, on the other hand, no effect when given as food to a number of healthy animals.

The only result that Virchow thinks is perhaps justified from these experiments, is that more animals were found to be

Further admitting, however, that innocuous substances may induce tubercle-like bodies, they claim that these bodies are not infectious, *i.e.*, they are *false* tubercles.

All these objections would be very plausible if they were based upon actual observations and facts; but, unfortunately for the bacillus theory, they are not: they are *mere unfounded assumptions*.

The fact established by experiments, that a true tuberculosis can be induced in animals by inoculation with innocuous and various other substances, and the significance of this fact, can surely not be overthrown by the imperfect evidence that the bacillus is more liable to do so, and still less by the mere unauthorized opinions of some of the writers.

Erroneous conclusions and views may easily be formed through the misconception of the significance of experiments.

At the meeting of the Pathological Society of London (December 4, 1883, quoted from the *Lancet*, December 8, 1883), Dr. Wilson Fox announced the following: "He was unwilling that his former observations|| should still be quoted as opposed to the doctrines of Koch and those who had been more recently working at the subject; and therefore he had felt bound to come forward and make known the modification which his views had undergone. At the same time," Dr. Fox, however, added, "there was perhaps some danger of phthisiophobia or phthisiomania. During the past thirty years there had been many changes in the doctrine of phthisis, and hardly any doctrine has lasted more than five years."

But what had happened to induce Dr. Fox to lose faith in his own honest and excellent former work? So far as I could learn, it was the following. Dr. Fox had requested a Dr. Dawson Williams to repeat his former experiments. This bacillus-excited gentleman introduced *carefully* some "*putrid fluids*" and some *setons* into a few guinea-pigs and—did not obtain tuberculosis! Now, they think, it was at once evident that in all the former successful inoculations with non-tuberculous materials the mischievous bacillus of Koch must have gained entrance.

tuberculous among a certain number which had been fed upon the "pearly" milk than among the same number which had been fed upon healthy milk.

(The above statements, first quoted by Dr. Whitney, of Boston, Professor Virchow corroborated in a conversation with me upon this subject last summer. H. F.)

|| Loc. cit.

The reasoning of the London gentlemen appears to have been here as follows: *Putrid matter and setons do not induce tuberculosis; but the bacillus does. Hence the bacillus is the sole specific cause!*

But what is gained or proved for the bacillus theory if any one given substance, when inoculated into an animal, does not induce tuberculosis? Does, through this, the necessity of contagion at once arise? Surely not. If, for instance, as I will prove, finely-powdered, sterilized glass is capable of inducing a true tuberculosis, then it does not matter if putrid matter or setons failed to do it.

Cohnheim's acceptance of a theory of a specific poison for tuberculosis, which formed as its direct outgrowth, the basis of the bacillus theory, was also not justified from Cohnheim's own experiments. If he once succeeded* with innocuous substances in producing *peritoneal tuberculosis*, it is of no consequence that he subsequently† failed to induce an *iris tuberculosis*.

Negative results prove nothing under the above circumstances and in the presence of positive results. Most of the observations made in bacillus studies prove really nothing for the etiology of tuberculosis, and some interpretations of the results of experiments in this direction are quite deficient and not consistent with the principles of experimental pathology. Furthermore, some of the positive evidence must be excluded on account of the evident deficient knowledge of pathological anatomy on the part of some of the experimenters.

I am glad to be in the position to offer in my next communication a new series of observations and experiments on tuberculosis. These experiments, instituted under the auspices of Dr. Pepper, provost of the University of Pennsylvania, and executed by myself and assistants under all rules of scientific precautions and with full facilities for such work, plainly demonstrate that *the etiology of tuberculosis does not rest with Koch's "parasitic" bacillus or any other "contagion."*

The experiments referred to will be given in full details in a special report now in progress and soon to be published with appropriate illustrations, etc.

I desire, however, to announce here

that *my experiments prove that finely-powdered, sterilized glass, ultramarine blue, and other substances are by themselves capable of producing tuberculosis in animals or tissues liable to this affection.*

Further, I will offer proof that this effect (tuberculosis) ensues without the intercurrent action of any bacterium. And, finally, that in those instances where miliary, nodular eruptions have been induced by the tubercle-bacillus (or substances containing it), the action of the latter is a purely mechanical one, like that of simple irritants.

Further, these experiments show that the only advantage which the bacilli have over other finely-divided matter and simple irritants is that the former multiply and thus intensify their action, while mechanical irritants have not this property, and hence must be introduced in larger quantities. The more finely divided the matter, the more prompt seems to be its effect, and I believe it is impossible to render any matter more finely divided than the bacilli.

Like others, I also often succeeded in tracing the formation of the tubercle-nodules to the effects of the irritating particulate matter, if the latter were or could be made distinct enough to be seen within the nodes. When ultramarine blue was used for inoculation, granules of the latter substance were seen within the nodes; when bacilli were used to that end, then bacilli could be detected within the nodes. But in either case these primary nodular eruptions, *if rapidly formed*, do not yet represent tuberculosis, as I will show.

It is generally conceived that a specific infectious disease, such as instanced by variola, syphilis, anthrax, etc., can have only one cause or one poison which will produce that disease and nothing else, and cannot be substituted by anything else.

For tuberculosis this is not true, for we have bacillary and non-bacillary forms of tuberculosis.

It is now no more a question of observation and experimentation, but rather one of interpretation and understanding of the results; for we have seen that the evidence from experiments and microscopical studies is nearly sufficient.

But there are misconceptions. If that only is tuberculosis where the bacillus of Koch is found, or that only which arises from the effects of this bacillus, then Koch's theory of the exclusive pathoge-

* Loc. cit.

† Sitzungsberichte d. Schlesischen Gesell., 1878.

tic properties of the bacillus is correct, and under such a definition tuberculosis has only one cause. But if true tubercles exist and can be produced without the bacillus, which has been shown to be the fact, then Koch's theory cannot be accepted from a pathologico-anatomical stand-point; or else we are obliged to admit two or more kinds of tuberculosis,—one due to Koch's parasite, and others to a variety of causes.*

So far, however, we have no reason, from a pathologico-anatomical stand-point, to subdivide tuberculosis, and therefore I am of the opinion that Koch's view of the exclusive pathogenetic property of his tubercle-bacillus is decidedly overdrawn and even not warranted by facts. Neither the specific action of Koch's bacillus, nor the specific character of tubercle, nor the contagiousness of phthisis or of any form of tuberculosis, is proved.

Only after a complete harmony of the facts derived from pathologico-anatomical, experimental, and clinical studies in tuberculosis with those revealed by mycology, and not from either of these alone, can we arrive at a settlement of the question of the etiology of tuberculosis.

Further details concerning this question will be incorporated in my report. This will embrace also studies into the onset and the distribution of tuberculous affections.

From the above analysis of the bacillus question and of the etiology of tuberculosis the conclusions follow—

1. That the bacillus of Koch is a valuable diagnostic sign of tubercular disease.
2. That nothing is proved by its discovery for the etiology of tuberculosis.
3. That the too ready acceptance of the bacillus doctrine is not justifiable, and is likely to do more harm than good.
4. That neither phthisis nor any form of tuberculosis is contagious.

THE PHILADELPHIA SCHOOL OF ANATOMY is now open for the spring course of lectures under Dr. George McClellan, who will lecture upon the anatomy of the eye, ear, and internal organs.

* A suggestion to separate an "infective" form of phthisis from ordinary phthisis has been made by Dr. Reginald Thompson (*London Lancet*, No. 6, 1880, quoted by R. S. Smith, Bristol, *Medico-Chir. Journal*, No. 1, 1883). "In a series of fifteen thousand cases observed, fifteen cases (only one per one thousand) proved to be of an infective kind,—viz., with history of contagion and absence of phthisical family history."

REPORT ON THE PROGRESS OF OPHTHALMOLOGY.

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BRAIN AND EYE.

DR. NIEDEN, of Bochum, contributes some clinical records to the well-recognized but poorly-understood subject of the relations between intracranial disease and the eye. The following abstracts are necessarily brief, but contain the leading points.

Case I.—Mr. M., æt. 25, six months ago received a violent blow on the back of the head. Three months ago, periodical headache in occiput, violent in character and accompanied by vomiting, set in. At present vision is normal. A few weeks later, R. E., V = $\frac{1}{3}$; L. E., V = $\frac{1}{2}$. Choked disk on each side. Pupils of normal size, reacting well to light and movements of convergence. Five weeks later, total blindness of each eye. Swelling of the papillæ began now to decrease, and in the course of some months total atrophy of the optic nerves was observed. One year from the inception of the symptoms an epileptiform attack occurred. Then followed paresis of bladder and rectum, also of left upper and left lower extremities, paralysis of right facial nerve. Pupils equally dilated, and showing no reaction to ordinary stimuli; frequent epileptic attacks; finally death. Post-mortem showed an ivory exostosis from the inner surface of the skull-cap, embedded in the right lobe. In this position a heteroplastic mass was found, having been directly in contact with the exostosis. It proved to be a fibro-sarcoma. The dura mater was normal, pia mater turbid. Structure of cerebrum and cerebellum more or less anæmic: some serous effusion in the ventricles. The author attributes the early disturbance of vision primarily to the direct pressure of the tumor; later the increased intracranial pressure probably contributed. [Points of interest in this case are (a) the time which elapsed between the reception of the injury and the visual disturbance; in ordinary cases of brain tumors, of course, the exact time of commencement of growth cannot be so accurately determined; (b) the great rapidity of the destruction of the sight of both eyes; probably to be attributed to

the pressure of a distended third ventricle upon the chiasm (Türk), rather than to the direct pressure of the tumor. H.]

Case II.—A young and healthy man became suddenly affected with diplopia, due to paralysis of right rectus externus. Soon after, an attack of facial erysipelas was followed by paralysis of the left rectus internus. At the same time cerebral symptoms, headache, etc., were developed. The paralysis then rapidly extended to the right facial and acoustic nerves, and the branch of the third supplying the right inferior oblique muscle. Then the superior and inferior recti of the left eye became paralyzed. Left hemiplegia gradually developed; then paralysis of the hypoglossus, dysphagia, paresis of the vesical and rectal sphincters. The ophthalmoscope about this time showed slight swelling of the papilla, its outline obscured, retinal veins enlarged and tortuous, but no ecchymoses. Death seven months after the first symptoms noticed. Autopsy revealed marked fullness of the arachnoid veins of the right hemisphere, both lateral ventricles filled with fluid, a gliosarcoma involving the right half of the pons.

The explanation of the development of the symptoms then was: the tumor started in the nucleus of the right abducens, affected the facial and acoustic, the nucleus of the right patheticus and that of the hypoglossal. Evidently up to this time the nuclei of the oculo-motorius were not disturbed by the direct pressure of the tumor, because of the different amount of paralysis of each third nerve; on the right side only the branch to the inferior oblique, while on the left side four distinct branches were involved. The explanation for the involvement of the oculo-motorius is to be sought in the connection which exists between the nucleus of the abducens and that of the oculo-motorius of the opposite side; the former being pressed upon, movement of the left eye towards the right was hindered; in other words, the paralysis of the left oculo-motorius was reflex. The author further suggests the possibility of a connection between the nucleus of the patheticus of one side and that of the oculo-motorius of the other side. This at present appears to be an open question. [The leading point in this case is what the author reports as an illustration of associated ocular paralysis. In other words, where two central nuclei of motor nerves

concerned in an associated movement have anatomical connection, the destruction of one nucleus impairs the function of the other. Thus, the rectus internus of one side and the rectus externus of the other are concerned in the lateral movements of the eye directly outward. Now, if the abducens nucleus, which is in anatomical connection with the motor oculi nucleus, be destroyed, not only will there be destroyed innervation of the abducens, but also of the rectus internus, at least in the lateral movement. A few cases of this kind have been reported (A. Graefe, Féréol). In Féréol's case, without paralysis of any other muscles, this associated movement was wanting. The diagnosis of a tubercular tumor situated in an abducens nucleus was made, and the post-mortem revealed a small tumor exactly in this position. This, however, may not pass without criticism. It is evident that direct pressure is not the only factor to be considered in the symptomatology of brain tumor. The effect produced upon the intracranial circulation and the general intracranial pressure, and the question whether the lesion be in the motor area of the cortex cerebri or somewhere between it and the nerves which it governs, must also be considered. H.]

Case III.—Mr. C., a lawyer, æt. 46, noticing difficulty in reading at night, applied for a prescription for glasses. On examination, L. V. very poor, eccentric fixation, only quantitative light-perception in the outer part of the visual field; R. V. good. Motility of each eyeball normal; media clear; pupillary movements normal under incident light. There was, however, bilateral myosis. Fundus of R. E. normal. In left fundus optic disk atrophic. Retinal arteries attenuated. Fifteen months later, left eye was completely amaurotic. R. V. had deteriorated; lower outer quadrant of the disk showed a white discoloration; diameters of pupil had increased to medium size. Five months later, R. V. had again markedly decreased, and the nasal half of the field had narrowed. The gray discoloration of disk was more marked and the arteries thinner. Still no general symptoms could be discovered. Knee-reflex was normal. The pupils were equally widely contracted upon accommodation effort, but responded very little to light. Seven months later, vision had decreased from $\frac{1}{2}$ to $\frac{1}{10}$; fixation had become eccen-

tric. One month later, there was complete amaurosis. Up to this time there were no general symptoms. By and by morbid mental symptoms appeared, such as irritability, querulousness, egotism, extravagant ideas about his wealth. Both optic disks were now of a pronounced gray, deeply excavated. Retinal arteries hardly discernible. Nystagmus set in, the movements of the eyeballs being partly rotary, partly vibratory. The patient saw most beautiful phosphenes. The *manie de grandeur* increased. The patient was removed to an asylum, and died suddenly a short time afterwards, being seized with convulsion followed by coma. Post-mortem showed a large quantity of bloody serum in the arachnoid space; pia mater adherent, especially over left frontal lobe; left frontal and parietal lobes flattened; right occipital lobe shorter than normal: cerebral substance very soft and oedematous; cerebellum not quite so soft. [This case, the reviewer supposes, should be classed among the psychical cerebropathies,* *i.e.*, those dependent upon a primary cerebral or cerebro-spinal lesion, to which the psychical symptoms add themselves as a complication; to be distinguished from the dementia paralytica. The case is an important one, as it was followed from beginning to end. Notice—1, the early appearance of the eye-trouble; 2, the rapidity with which the total atrophy sets in; 3, the manner in which the visual field is limited, central fixation being lost before the amaurosis appears; 4, the attenuation of the retinal arteries. The resemblance between the eye-symptoms in cases of this kind and in *tabes dorsalis* has been noted by observers. In this connection, the existence of normal knee-reflex is an interesting point. H.]—*Archives of Ophthalmology*, vol. xii. p. 364.

THE EYE-DISTURBANCES IN *TABES DORSALIS*.

Dr. L. Schmeichler, of Vienna, has lately written an interesting paper on this subject. The following leading points are abstracted from it. The clinical material upon which the paper is based was derived from the eye clinic and a hospital department partly devoted to nervous disorders; also from the Home for Incurables. As the eye-symptoms of *tabes* are generally initial, the cases were,

therefore, studied in the inception, in the progress, and in the decline of the disease. The eye-symptoms may be divided into—1, those of the optic nerve; 2, those of the pupil; 3, those of the eye muscles.

1. Disease of the optic nerve. Atrophy is a frequent and early symptom of *tabes*; hence the importance, in case of atrophy, of testing the tendon reflex, etc. Schmeichler has never seen a commencing optic nerve atrophy where the spinal sclerosis was fully developed, and estimates from his own experience and that of others that forty per cent. of cases of incipient optic nerve atrophy may be traced to *tabes*. Both eyes are affected at the same time, but often in different degrees. The only essential ophthalmoscopic appearance is the discoloration of the papillæ; this is the first symptom of the atrophic process, but as the disease advances vessel-changes are apparent. The apparent calibre of a vein on the papillæ may enlarge to double the normal size, retain the enlargement for some distance from the disk, and then gradually narrow to the normal calibre. This is independent of anything like papillitis. One cannot tell from the ophthalmoscopic appearances whether the visual acuteness is much decreased or not; papillæ which apparently are exactly similar are associated with very varied amounts of sight. The characteristic field of vision is the one with concentric limitation. 2. The pupillary changes in *tabes* are (a) reflex iridoplegia, or lack of pupillary reaction to light; (b) total iridoplegia, or absence of the reaction on convergence (the accommodation being intact); (c) myosis, or contracted pupil; with atropia it may be widened to four or five millimetres' diameter, and rapidly contracts again under pilocarpine: the pupil dilated with atropine, if left to itself, requires a long time (four to five weeks) to reach the same size it possessed before the use of the mydriatic; (d) inequality of the pupils, a striking symptom, but not so characteristic as those previously mentioned. 3. Changes in the innervation of the ocular muscles. This results in paresis of one or several of the muscles. It generally occurs very early in the disease,—sometimes precedes every other symptom by many years. A clinical illustration of this is given. The paresis generally comes on gradually; may remain constant, or after several months disappear entirely, in

* Vide Schüle. Ziemssen's Encyclopædie, Zweite Deutsche Auflage, Bd. xvi.

some cases reappearing after several years.—*Archives of Ophthalmology*, vol. xii. p. 335.

NEURASTHENIC ASTHENOPIA.

Dr. Wilbrand, of Hamburg, employs this name to designate a well-known group of cases usually classified under the name of retinal anæsthesia or retinal hyperæsthesia. He thinks that it ought not to be considered as merely a local morbid condition, but as one of a series of morbid phenomena having their foundation in an abnormal state of the general nervous system. The first point to which attention is directed is that in these cases we find all grades of retinal anæsthesia. To illustrate this, the clinical histories of a number of cases are given, together with perimetric charts of the visual field. An interesting observation is reported in connection with these charts. If the field be taken by moving the test along the meridians, say from left to right, and, after the field is completed, the patient has rested twenty minutes, the examination be repeated, and the test be moved from right to left, it will be found that, while the general outline of the two fields is the same, the contracted portions are in opposite halves of the field. This is explained on the theory of fatigue of the retinal elements from the examination. This form of visual field defect is to be distinguished from another in which there is limitation of the field in all meridians. It is noteworthy that in cases with very pronounced limitation and apparently defective vision, the patients have no difficulty in finding their way, and from their movement alone no indication is afforded of the ocular disturbance. Another common phenomenon is that during the perimetric examination the test-object will disappear and reappear at short intervals. These symptoms, along with others, such as lack of ability to read for any length of time, symptoms of weariness on the part of the ocular muscles, point, in the author's opinion, to a neurasthenic state of the nerve-centres belonging to the eye, and also to an abnormal state of the whole nervous system. In considering the diagnosis of this affection, attention is directed to the prompt and extensive reaction of the pupil to incident light. As regards the etiology, the author thinks the cases may be divided into two groups: one which is the result of congenital tendencies, the other being

acquired. Masturbation is not to be considered a direct cause. Anæmia, chlorosis, chronic atrophic parametritis (Forster and Freund), concussion of the brain, are adduced as causes. References are made to Beard's opinion as to the part played by the vaso-motor system in the production of symptoms in neurasthenia, and the foundation of this opinion,—viz., the hyperæmia of the optic papilla.—*Archives of Ophthalmology*, vol. xii. p. 428.

INTRAOCULAR HEMORRHAGE A COMPLICATION OF CATARACT-EXTRACTION.

Warlomont reports the following case. The patient, a woman, æt. 63, was seized with vomiting following an unauthorized bodily effort. The extraction had been previously made, unattended by any abnormal occurrence. Following the vomiting an intraocular hemorrhage occurred, violent enough to force its way through the cut and the bandages. On removal of the latter a large coagulum was found in the cut, widely separating its lips. Symptoms of panophthalmitis followed, and the ball was enucleated. Examination of the ball showed that the hemorrhage originated in the choroid. The vessels of the uveal tract were turgid. Retina and choroid were separated. Three months later, the second eye was operated on for cataract by extraction. This operation was also unaccompanied by any special difficulty, but a short time afterwards hemorrhage likewise occurred, followed by the ruin of the ball.—*Centralblatt f. Augenhk.*, December, 1883. [The point of interest in this case is the destruction of each eye by the same cause,—viz., secondary hemorrhage. This probably had its primary cause in some part of the motor apparatus of the blood. The age of the patient suggests sclerosis of the arterial coats. This case recalls certain cases of glaucoma where secondary hemorrhage occurs after iridectomy, and which, in the reviewer's opinion, are to be explained by sclerosis of the intracranial carotid. A practical question in this connection is whether it is proper to perform an iridectomy operation on the second eye when the same operation on the first has resulted disastrously in the manner described. The reviewer thinks not, so long as any other method offers a fair chance. In the case of cataract-extraction some of the extractions without iridectomy would be preferable to

the Graefe method. In glaucoma it cannot be said that any therapeutic measure has yet been devised equal to the iridectomy, but in such cases as those referred to above the reviewer thinks that it is contra-indicated.* H.)

AN OPHTHALMIC OBSERVATION BY THE KOCH
CHOLERA COMMISSION.

The following note occurs in the report of the Egyptian Cholera Commission: "Further, about fifty patients suffering with the Egyptian ophthalmia were examined. It was found that this name is applied to two different morbid processes. The one pursues a malignant course, and is caused by bacteria resembling the gonorrhœal micrococci, with which they are very probably identical. In the second and less dangerous process very small bacilli are constantly found among the pus-corpuscles (*in den Eiter-Körpchen*).—*Centralblatt für Augenhk.*, December, 1883. [The term "Ophthalmia Ægyptiaca" is one of the names which has been applied to the disease commonly known as granular lids. It originated about the beginning of the century in connection with the furious epidemic of ophthalmia which assailed the French and English troops in Egypt. H.]

CATARACT-DISSCISSION FOLLOWED BY DEATH.

Rheindorf reports a case of a five-month-old healthy child with congenital cataract upon whom he performed a dissection. No bad symptom followed for fifteen hours, when convulsions and death occurred. The probable cause, the author thinks, was an intense excitation of the ciliary nerves from the swollen lens producing cerebral congestion. [*Post hoc or propter hoc?* H.]—*Klinische Monatsblätter*, December, 1883.

MONOCULAR CATARACT COMBINED WITH
RACHITIC DIATHESIS.

Dr. Heuse reports the following case: The patient, æt. 4 years, had a marked rachitic projection from the right half of the forehead, which had first been noticed three years before, with other symptoms of rachitis. The right lens was partially opaque, the opacity being composed of a central point in the neighborhood of the posterior pole, with four short radiating prolongations. Unconnected with this

was a slight diffuse clouding of the lens-tissue. As the history of this case showed that some of the rachitic changes had already disappeared at the time of the above observation, the author thinks that possibly many cases of monocular cataract, when no bone-affection is demonstrable, may at some time have suffered from rachitis.—*Centralblatt für Augenhk.*, December, 1883.

A NEW REFLECTING-MATERIAL FOR MIRRORS.

Schoeler directs the attention of the profession to a new material for coating mirrors which has been discovered by Mr. Lohmann, of Berlin. It is a platinum preparation, and glass mirrors coated with it possess the property of simultaneously reflecting and allowing rays of light to pass through the mirror. The color of the coated glass resembles somewhat that of the smoked glass of the opticians. The reflecting powers of these mirrors as yet have not been investigated. Perhaps there may be some useful application made of this material in the construction of ophthalmoscopic mirrors.—*Klinische Monatsblätter*, December, 1883.

ON THE EARLY MANAGEMENT OF
INFANTILE PARALYSIS.

BY G. BETTON MASSEY, M.D.,

Electro-Therapeutist to the Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases.

Read before the Philadelphia Clinical Society, February 22, 1884.

GENTLEMEN,—The purpose of this paper is to call your attention to the importance of an early diagnosis of infantile palsy, and to point out the most approved methods for its therapeutical management. Yet, since I am not addressing a body of specialists, it may be well to anticipate these topics by presenting to you an outline of the disease itself as observed clinically.

Under the name of infantile paralysis or palsy, or, as it has been pathologically designated, acute anterior poliomyelitis, we must not make the mistake of including all forms of paralysis that occur in infancy. This period of life is liable to many forms of paretic disturbances of motility and sensation, such as those due to peripheral nerve injuries, to sclerotic changes in the central nervous system, and to altered conditions of blood-supply to

* In this connection, vide A Contribution to the Operative Treatment of Glaucoma, by Albert G. Heyl, M.D., Trans. Amer. Ophth. Society, 1883.

the brain resulting in hemiplegia. In fact, the last form of palsy, presenting all the characters of hemiplegia in the adult, is by no means uncommon in children of tuberculous parents, and requires to be carefully separated from the disease under consideration.

A typical case of true infantile palsy in the second stage—the stage in which it usually comes under observation in hospitals—is briefly characterized by the following salient conditions: wasting and weakness of the anterior tibial and peroneal groups of muscles of one or both legs, shown functionally by a flapping of the foot in walking, and inability to flex or peronate it; wasting and weakness of the quadriceps extensor muscle of one or both sides, with imperfect extension of the knee; loss of faradic response in muscles affected; coldness of the paralyzed extremity; and probably arrested growth of the whole limb or limbs. I have spoken here in the plural, but usually we find but one limb affected in this stage.

Such is an enumeration of the features invariably found in some degree in all cases of typical infantile paralysis subsequent to the first few weeks of the attack. To the picture may be added the distortion that is apt to be occasioned by the unopposed action of the healthy muscles of the part producing a form of club-foot; the arrested growth of the whole limb as compared with its fellow; and a statement that sensation remains perfect,—unfortunately for certain plans of treatment.

It is, however, to the first stage and its diagnosis that I wish to call your especial attention to-night,—the initial act in the drama that is destined to leave so great a mark on the life of the young individual. It is here that the work of the general practitioner touches closest on the disease; and on his skilful use of vigorous remedies much responsibility rests. The child, from one to three or five years of age, in perfect health, is suddenly attacked with intense fever. This fever may be accompanied by convulsions or other cerebral symptoms, but is almost always merely associated with serious derangements of the digestive apparatus. The paralysis follows with equal suddenness, usually gaining its greatest height between night and morning. The amount of the paralysis differs much in different cases, but is always far greater than the amount that will be found

to be present a few days afterwards, when the causative congestion of the cord has subsided. Usually both legs will be powerless; sometimes merely the deltoid muscle of one side; while in other cases all the muscles of the body are equally powerless, the patient being even unable to lift the head. Notwithstanding this extensive loss of motility, the sensation throughout the body remains perfectly normal, and the automatic integrity of the bladder and rectum beyond reproach. The diagnosis of the acute attack may be summed up under four points: viz., 1st, sudden motor paralysis, usually of one or both legs, subsequent to fever,—possibly in its absence; 2d, absence of any disturbance of sensibility; 3d, absence of paralysis of bladder or rectum; 4th, absence of marked cerebral disturbance other than that due to the febrile movement.

The pathological processes involved in the production of this acute stage are highly interesting and afford important suggestions for treatment. All observers are now practically unanimous in placing the real seat of mischief in the anterior horns of gray matter of the spinal cord, and are even still more exact in confining the location strictly to the large motor cells that are found in this situation. Although ocular demonstration of their condition in the very early stages is yet wanting, it is certain that the changes commence in the cells themselves and not in the surrounding neuroglia, and that the changes are of an irritative character,—a positive inflammation of the cell-elements in a minute area of the anterior cornu. This inflamed area may be of considerable extent longitudinally, but is strictly confined to the system of large motor cells,—in most cases even being confined to less than the whole of these cells, as the immunity of certain muscles from atrophy will show. The hyperæmia, however, that accompanies the more positive inflammation of certain cells nearly always involves the whole of this cell-group, so that we always have a greater paralysis at first than will be found to persist subsequently. In fact, a peculiarity of this trouble is the steadiness with which the paralytic symptoms will recede during the first few weeks of the attack, giving rise to false hopes of ultimate and complete recovery in the minds of anxious parents and too expectant physicians. The unvarnished truth is that

unassisted recovery will proceed only so far as the disappearance of symptoms due to the congestion surrounding the inflamed cells, while within that circumscribed area a blow has been struck that is beyond the reparative powers of nature.

What, then, is the patho-physiological expression of this change in the great cells of the anterior cornua? Simply an interference, or more or less complete abolition of their functions: as these functions are motor and trophic, we have an immediate motor paralysis of the muscles supplied by this area, together with an active degenerative process in the muscular tissue. The muscles not only cease to act, but tend rapidly to waste away by a process of fatty degeneration exactly similar to the retrograde metamorphosis that occurs in muscular tissue when it is severed from its nutritive centre by disturbance of nerve-conduction.

The electrical reactions are a most delicate test of this secondary change in the muscles, and by them we can predict the impending atrophy with absolute precision long before it becomes evident to the eye. They consist of the peculiar series of changes that are found alike in this disease, in lead-palsy, and in peripheral palsies due to nerve-injury, and that have been denominated the "reaction of degeneration." Briefly stated, this reaction of degeneration consists of a failure of the faradic current to produce any response in the muscle; increased action of the muscle to the galvanic interruption stimulus; and a relatively greater action from the anode than from the kathode. It will be seen, later, that these departures from the ordinary electrical responses have an important bearing upon treatment as well as upon diagnosis.

Strangely enough, this disease has been found occasionally to occur also in the adult individual, although the very great majority of cases are in children from eight months to five years of age. These instances of adult poliomyelitis do not differ in any essential particulars from the type here given.

Having properly diagnosticated the case, what should be done by the physician to relieve the little sufferer and lessen, if possible, the threatened deformity? If he is fortunate enough to be called in at the outset, he should institute without delay an active antiphlogistic treatment, directed

to the seat of the disease in the cord. This should consist of blisters on the back, over the lower dorsal and upper lumbar vertebræ, if the case be the usual one of paralysis of the lower limbs; higher up, at the nape of the neck, if the shoulder or arm is affected; revulsives to the extremities; low diet and appropriate constitutional treatment. No electrical applications should be used at this time, except possibly for purposes of diagnosis, since the condition is one of acute irritation. Such would be the proper treatment for the first four or five days. After that time, and when the blister has healed, gentle, continuous currents (galvanic) of two or three minutes' duration should be applied to the back, and the regular galvanic applications to the muscles be begun. These should consist of the galvanic current so interrupted as to produce contractions when the poles are applied close together on the muscles. No more current should be used than is necessary to obtain motion; and, since the reaction of degeneration is always present in the early stages, it will be found that placing the anode above will insure the greatest activity of the muscle with least pain. It is by no means necessary to make each muscle contract separately, but careful attention should be bestowed upon the physiological groupings of muscles, in order that those that are naturally associated in movement should be simultaneously acted upon.

As I said before, these applications should be made with the galvanic form of electricity only; and I cannot here too strongly condemn the usual prescription of faradism for such cases as unscientific and totally useless. Even if galvanism fails to produce contraction, the well-known electrolytic and catalytic effects of this current make it of great service to the paralyzed muscles.

The sittings should be repeated thrice weekly for months at a time, and should be alternated with thorough professional massage if possible. Under such a régime, and with the prescription of small doses of strychnia in late stages, it is certain that the paralyzed member can be kept nearer to the condition of its more quickly growing fellow by persistent and careful treatment. If neglected during the first years, the loss of time is irreparable.

CHLOROFORM SHOULD BE USED IN STRYCHNIA-POISONING—NOT TOBACCO.

BY FRANCIS L. HAYNES, M.D.

IN a recent number of this journal a case of strychnia-poisoning treated by infusion of tobacco is recorded (*Phila. Med. Times*, February 23, 1884, p. 407).

It has been well established, by published cases and experiments, that tobacco, though a powerful emetic, is not a true antagonist to strychnia. It should not be used in strychnia-poisoning, for the following reasons:

1. Tobacco, taken by human beings, may produce convulsions and death.
2. Nicotin produces convulsions in the lower animals.
3. Animals that have recovered from doses of nicotin and strychnia given at separate periods, may be killed by the same doses given together; showing that they aid, instead of antagonizing, each other.
4. Chloroform and chloral are certainly the most efficient remedies yet proposed for strychnia-poisoning. In severe cases, where it is impossible, on account of the firm contraction of the muscles of the jaws, to use internal medication, chloroform may be used by inhalation, or chloral by enema, where otherwise the physician would be powerless. Chloroform, in such severe cases, is by far the best remedy, as chloral is very apt to be rejected by the rectum.

REFERENCES.

Cases of convulsions produced by tobacco: 1. Stillé, *Therap.*, Phila., 1868, ii. 325 *et seq.*, mentions five cases, some ending fatally. 2. Mitchell, *Therap.*, Phila., 1850, 544, quotes a fatal case from *London Lancet*, March, 1850.

Experiments with nicotin and strychnia: 1. Reese, *Amer. Jour. Med. Sci.*, April, 1871, 382. 2. Wormley, *Micro-Chemistry of Poisons*, New York, 1865, 545. 3. Haynes, pamphlet, from *Trans. Am. Philosoph. Soc.*, March 16, 1877.

Chloroform in strychnia-poisoning: 1. Dresbach, Tiffin, O., said to be the first who gave chloroform internally for this purpose. *Case*.—A man swallowed three grains of strychnia in solution; very violent symptoms in twenty minutes; two drachms of chloroform swallowed; complete relief in less than twenty minutes. *Am. Jour. Med. Sci.*, April, 1850, 546; Wormley, *op. cit.*, 544. 2. Leech, *Med. Times and Gaz.*, November, 1863, 487. 3. Smith, J. R., *Am. Jour. Med. Sci.*, July, 1860, 278. 4. Wily, recovery after four grains of strychnia, *N. Y. Journ. of Med.*, 1859, 422. 5. Gobrecht, *Antagonistic Effects of Chloroform on Strychnia*, *Trans. Penna. State Med. Soc.*, 1871.

Chloral in strychnia-poisoning—experiments. Bennet, *Antagonisms of Medicines*, London, Churchill, 1875.

280 EAST CUMBERLAND STREET, PHILADELPHIA.

PROF. HENRY G. LANDIS, of Columbus, Ohio, delivered an address on the "Need of Culture in the Physician" before the Alumni Association of the Jefferson Medical College.

TRANSLATIONS.

CHOREA OF THE LARYNX.—According to Blachez, chorea of the larynx in children is of the rarest occurrence, though a similar affection is often met with in hysterical women. Blachez has seen two cases of this disease in children.

The first case was that of a lymphatic child of arthritic parents, who at first suffered from a slight laryngitis with spasmodic cough, which in a few days assumed a most remarkable character: five or six violent coughs rapidly followed one another, accompanied by a hoarse barking, which, however, did not interfere with sleep. No other choreic symptoms were present. Belladonna and valerian were employed without effect, though the attacks, which at first were very frequent and of short duration, became of rarer occurrence, though their duration was prolonged for one or two hours. Chloral finally arrested the attacks.

The second child was weak and anæmic, and in the course of a slight bronchitis became subject to attacks of spasmodic coughing, which were accompanied by a peculiar cry which most closely resembled the sound made by a mechanical toy sheep. This cry, which was always of the same character, occurred nine or ten times within a few minutes, the attacks coming on several times during the day, but never during sleep.

The child is very nervous and excitable, and constantly covered with perspiration; no choreic movements are present. The disease disappeared in about three weeks, under the use of bromide of potassium.—*Centralbl. f. d. Med. Wissen.*, January 5, 1884. S.

PTOMAINES.—L. Giacomelli reports (*Lo Sperimentale*, October, 1883) the discovery of a cadaveric alkaloid which in its principal reaction closely resembles picrotoxin. By the investigations of Maas, ptomaines were obtained resembling strychnia and morphia in their effects upon animals.—*Fortschritte der Medicin*, xv., 1883; from *Deutsche Medicinal Zeitung*.

LEMONADE FOR DIARRHŒA.—Dr. Vigouroux recommends a glass of hot lemonade every hour, or half-hour, as an easy, agreeable, and efficient treatment for diarrhœa.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 5, 1884.

EDITORIAL.

CRITICISMS UPON THE MICROBIC
THEORY OF THE ORIGIN OF
TUBERCLE.

WITH the present issue we lay before our readers the conclusion of Dr. Formad's contribution to the controversy regarding the origin of tuberculosis. We have felt warranted in devoting an unusual amount of space to the publication of this important article in full, because we regard it as embodying the most able criticism of the specific bacillary theory of Koch that has yet appeared; and also because an abstract of the argument of Dr. Formad would not have done him justice. We hope that it will be read carefully by all who are interested in this most important topic. In order to make the discussion more complete, the results of Koch's latest investigations, given in his report to the Imperial Board of Health, will be presented in our next issue.

It is evident that the demonstration of the existence of a microbe justly entitled by its specific and contagious properties to be designated as the bacillus tuberculosis, requires a concurrence of expert testimony in its favor, from skilful and competent observers in the domain of mycology, in that of pathological anatomy and of clinical medicine. It would be unnecessary to say that unless the theory which is offered agree with the known facts of morbid anatomy and clinical observation, it cannot be sustained,—no matter how plausible it may appear or how complete the chain of reasoning may be in the direction of microphytic investigation,—were it not that there seems to be some danger that clinical observers may overlook the

fact that Koch's studies do not at all affect our knowledge of the symptomatology of phthisis: it is just as contagious—no more and no less—as it was before the specific bacillus tuberculosis was reported. Previous to the announcement of Koch's discovery, clinical teachers in Europe and America were almost unanimous in their opinion that phthisis was not contagious; since the promulgation of Koch's theory that "consumption is caused by inoculation with the bacillus tuberculosis, and in no other way," however, there has occurred almost a revolution in medical teaching, and clinicians are vying with one another in bringing forward evidence of the contagiousness of tuberculosis. Just as we had, as we thought, definitely settled the diagnosis of tubercle upon an anatomico-pathological basis (the essential properties being (1) an aggregation of small cells, with giant-cells frequently, if not always; (2) an intercellular net-work, and (3) a tendency to retrogressive metamorphosis), we are asked to subscribe to a new criterion of tubercle, the presence of the bacillus tuberculosis; everything is tubercle which contains these bacilli, nothing is tubercle where they are absent; giant-cells are merely swollen cells containing bacteria as in a capsule. This criterion is indeed new; clinical observers and pathologists are now busily engaged in determining whether or not it is also true. From these laborious and precise histological and clinical investigations great advantage will undoubtedly result, even if the Koch hypothesis be tried and found wanting.

Already some of Koch's followers are prepared to admit that the bacillus tuberculosis requires a suitable soil for its development and growth: what this antecedent something may be is still undefined; but it is evident that it cannot be very different from the tuberculous dyscrasia so long and so well known to pathologists and physicians.

It is a general law in pathology that morbid processes tend to self-perpetuation; moreover, a morbid reaction existing in any particular tissue tends especially to extend in tissues and organs of like structure. Therefore, under favorable circumstances, all diseased processes may become infective.

It has been suggested that the cultivation and inoculation experiments with infected material may be simply an evidence that the bacilli are excellent carriers of infection, and do not readily part with this power when it has been once acquired. Their peculiar chemical characters are easily accounted for by their habitat. It is also known that the several varieties of microbes are not permanent in their morphological characters, but are capable of developing into different forms under varying conditions of culture. (Naegelle.)

Furthermore, from the experiments of Tyndall, we are satisfied of the almost universal presence of spores in the atmospheric air which are capable of causing the different varieties of fermentation and putrefaction by their development and multiplication. These germs of disease, as they have been called, may really be humble ministers of health, since they attack highly-organized devitalized or dead tissues and reduce them to simpler chemical compounds. It may be that these ordinary germs find a suitable soil for growth in the tissues of low vitality in the consumptive patient, and may then *secondarily* cause disturbance and decay by their development. The patient, under such circumstances, would not be tuberculous because he was the host of the bacilli, but just on account of the previous existence of the tuberculous dyscrasia would his tissues form a proper soil for the germs. Tuberculosis then would resolve itself into a peculiar necrobiosis, and the principal object of treatment would be not to destroy the microbes, but to labor so to build up the powers of nutrition as to

render the patient an unfavorable soil for their detention and development. Clinical experience supports this view of the nature of phthisis pulmonalis, since all over the world hygienic and restorative treatment has produced better results than can be hoped for from the use of antiseptic medication.

A "RECLAMATION."

THE *Moniteur de la Polyclinique*, in an article "aux Yankees," is very complimentary to us, but, consistently with French character, is a trifle inexact. It accuses the Americans of not reading the *Moniteur*, but, in the next sentence, claims that we plagiarize shamelessly. This is certainly a compliment to our intelligence, for we must be bright indeed if we can plagiarize without reading the original! As an illustration of the truth of the statement, the *Moniteur* cites an article on "Epilepsy," which Dr. W. Thornton Parker (who is spoken of as the redacteur (!) of the *Philadelphia Medical Times*) was supposed to have written, but which the editor of the *Moniteur* claims is merely a paraphrase of an essay which he wrote upon the same subject in 1875. We find, upon reference to Dr. Parker's article on "The Treatment of Epilepsy" (p. 892, vol. xiii.), that it is only two pages in length, that it disavows novelty at the outset, and that it is made up of the reports of two cases from Dr. Parker's private practice, with one or two quotations from current literature and standard authorities. Unless the editor of the *Moniteur* has a copyright upon all that is known up to the present time about epilepsy, we cannot understand the force of his criticism, if that article be the one referred to. By the way, will not our metropolitan contemporary, the *Medical Record*, kindly inform the editor of the *Moniteur* as to the personality of the "redacteur" of this journal, and so relieve his mind of some evident uncertainty upon the subject?

NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

COLLEGE COMMENCEMENTS.

CINCINNATI medical colleges have been more poorly attended during the last year than for a number of years before. The result has been a greatly-decreased number of graduates from most of the schools.

The commencement exercises of the Cincinnati College of Medicine and Surgery were the first to be held. They graduated a class of fifteen, and Dr. Amick delivered the valedictory. Next came the Miami Medical College, with twenty-eight graduates, and Dr. William H. Taylor as valedictorian. The Ohio Medical concluded the list, with a class of one hundred. Prof. P. S. Conner delivered the valedictory. The attendance at the irregular schools has suffered even a greater decrease. The Pulte Medical College (Homœopathic) graduated a class of sixteen, when they usually have twice the number, in point of numbers it ranking, as a rule, with the Miami.

ANATOMICAL MATERIAL.

Considerable excitement has recently been created in our city by a murder perpetrated for the sole purpose of selling the bodies for dissecting purposes. The laws of Ohio permit the bodies of unclaimed paupers to be given to the medical colleges. This would furnish plenty of material, but for the fact that these bodies are not unfrequently claimed by people who manifested no interest in the individual while living. The result has been some shortness in anatomical material, which Dr. Cilley, demonstrator at the Ohio Medical College, has endeavored to remedy by calling into service two resurrectionists of this city. Some three weeks ago, it appears, these two worthies—colored men, named Ingalls and Johnson—thought that they could more easily knock down an aged colored couple and a young girl who lived with them, than resurrect some bodies already dead and buried. They knew well the lonely habitation of the old darkies, and were without any doubt as to the result of their expedition. So sure were they of success that they even made the bargain for the delivery of some "stiffs" with Dr. Cilley and engaged an express-wagon to haul them in while their intended victims were still in the innocent enjoyment of their usual health. These two fiends went to the home of the intended victims, knocked them on the head, and when the express-man arrived the subjects were ready,—still warm, it is true, but dead beyond a doubt. After they were delivered to the College the murderers returned and set fire to the hut, hoping that all evi-

dence of their crime might thus be destroyed. However, one thing after another pointed to the commission of a horrible crime, until the authorities began to search for the bodies. After not a long while, these were found in the Ohio Medical College, awaiting the opening of the spring session. The secular press has been filled with sensational accounts of the tragedy, and much blame has been cast upon the profession in general and Dr. Cilley in particular.

Notwithstanding Dr. Cilley's ready aid in the discovery of the bodies (and without his aid they would never have been discovered), the daily papers have vied with each other in their endeavor to cast the most suspicion upon him. The profession, as a rule, have stood by one another. One physician appeared in print in a medical journal of our city seeming to insinuate that Dr. C. was not altogether blameless in the matter, but he explained in the next number of the same paper that he did not intend what his language seemed to imply.

A. B. T.

March 14, 1884.

CHICAGO.

CHICAGO has, all told,—State, county, and United States,—thirteen hospitals. The whole number of beds, including the United States Marine Hospital, is one thousand one hundred and ninety-one. There is now in process of completion accommodation for an additional two hundred and fifty beds, which will give us, at the end of the year, a total of one thousand four hundred and forty-one. Many of the institutions herein included occupy buildings constructed without due regard for sanitation, now considered so necessary for the better accomplishment of their work. There are a few, however, of recent construction, having all modern improvements, and among those may be classed the largest. The county hospital is the only one devoted to charitable work in its broadest sense; the others exact payment from nearly all patients. The fifteen hundred medical students in this city have regular instruction in four of the hospitals only, thus giving a very limited field of observation for so large a number of pupils.

The forty-first annual commencement exercises of Rush Medical College took place at Central Music Hall, February 19, with a graduating class of one hundred and sixty-seven members. The banquet was given at the Grand Pacific Hotel in the evening, Professor James Nevins Hyde unveiling a portrait of Professor Allen, the occasion being the twenty-fifth anniversary of Professor Allen's connection with the school. The portrait is to be placed upon the walls of the main amphitheatre of the college.

The College of Physicians and Surgeons—

the latest candidate for patronage—opened this winter with a class of one hundred and seventy-four. The commencement exercises of this school were held at the Grand Opera-House, March 11, in the presence of the usual large audience. The Secretary opened the exercises with his report, in which he claimed that this school offered such advantages as to draw forty-two students from other colleges. He also claimed for the class a standard of literary attainments far above those of most students of medicine, and that the thoroughness of the preliminary examination for matriculation had deterred numbers from an attempt to enter the college. You will observe that our youngest is not to be outdone by the criers of other wares.

The commencement exercises of Chicago Medical College will take place March 25, with a graduating-class numbering fifty-two.

All our schools now claim to have reached a degree of excellence never before attained, mainly in the manner of teaching and examination. Though stress is laid upon the requirements and the strictness of the examination for matriculation, this is, in fact, the weak point. Few, if any, presenting for matriculation are rejected, and when a person is rejected upon this ground he must be densely ignorant.

In the doctorate address delivered at one of our college commencements, the speaker, in referring to the action of the county board in making appointments upon the medical staff of the county hospital, said, "You who are familiar with the political formulas of this city need not be told how these appointments are made. In your imagination you are present at that important meeting of the county commissioners. You recognize some of them, at least, whose occupations are not calculated to give an enlightened view of the wants of a large hospital or to develop a heart keenly alive to the want and wretchedness of the poor and distressed in a great city. They proceed to business: Commissioner Hans Olson nominates his friend Hans Jansen, M.D.; Commissioner Patrick Murphy nominates M. O'Flannigan, M.D.; Commissioner Bingenheimer nominates Dr. Ernst Schliesenger. They are unanimously elected, and the most important interests of that magnificent hospital are handed over to the supervision of these men, who, however fully they may represent the different races of our body politic, or the political influence of a ward upon the county elections, in no sense represent the best medical talent of this great city."

Our local medical societies, two in number, languish; the meetings are thinly attended, the papers, as a rule, not being able, the discussions spiritless. This condition of things has existed for some time, and the meetings would, were it not for the younger element, degenerate into a mere social chat.

The law requiring physicians to return certificates of birth to the county clerk has never been generally observed, nor has there been any effort on the part of the authorities to enforce it, and the result is that physicians generally pay little attention to it,—possibly not more than one-third of the births being recorded. It appears that this laxity on the part of medical men is due to the difficulty and trouble in procuring the necessary blanks. Many physicians have applied to the city health department for the forms, and have there been informed that application should be made to the county clerk, in another part of the city. Applicants have, upon visiting the county clerk's office, found that they could not always receive prompt attention, and have gone away disgusted. A few physicians have addressed the county clerk through the mail, requesting forms to be forwarded, but without success; and now the authorities threaten to prosecute the delinquents.

A prominent practitioner of this city gave notice to the health commissioner a few months ago that he would not report cases of contagious disease to the health department unless compensated for such service, and recently the commissioner received a bill from the physician in question, demanding twenty dollars for twenty cases reported. The bill was referred to the city attorney for an opinion, and the claim was promptly denied in a note severely criticising the gentleman who thus refused to serve the city without compensation. The profession generally feel that this sort of work should be paid for by the corporation for which it is done, and that such service cannot in any sense be considered in the light of charity.

The State Board of Health, at a special meeting, considered the application of a number of physicians for certificates. Several were refused on the ground of unprofessional conduct, among them being one Dr. Simon M. Landis, a graduate of the Pennsylvania Eclectic College. This doctor claimed that he had mystic power, challenging clergymen and physicians to discussion, asserting that their teachings were unnatural, etc.

Notwithstanding the winter has been one of the most severe ever known, the health of the city has remained very good. Scarlet fever has prevailed to some extent, but the disease has generally been mild. M.

March 15, 1884.

SCARLATINA IN THE HORSE COMMUNICATED TO MAN.—Dr. Fenner, D.V.S., having slightly abraded his hand in giving a bolus to a horse suffering with what was considered equine scarlatina, was himself attacked, seven days later, by fever and a typical scarlatinal angina, which kept him in his room for a fortnight.—*New York Medical Record*.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 21, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. LEONARD WEBER read the scientific paper of the evening, on

LOCOMOTOR ATAXIA AND SYPHILIS.

The author reviewed the general evidence concerning a possible connection between locomotor ataxia and syphilis. The percentage of cases of locomotor ataxia in which syphilis was present, according to various authors, varied greatly; commencing from below 18 per cent., we have 18, 20, 21, 70, 80, 88, and up as high as 91 per cent. The latter two numbers are those of Erb. Some degree of variation in statistical figures could easily be accounted for, but such as existed here threw doubt upon the value of this method in determining the etiological relation of syphilis to posterior spinal sclerosis. Pathological observations had not definitely proved this relationship. Dr. Weber thought it not improbable that in constitutional syphilis the irritation of the syphilitic poison might start such an inflammation as would lead to the lesions which had been found in posterior spinal sclerosis when other conditions were favorable for its development. In his own practice he had found evidence of syphilis being present in fewer cases of locomotor ataxia as a possible etiological factor than several other conditions. The most common was rheumatism. Masturbation in early youth and continued for some time exerted a very baneful influence upon the nervous system in both boys and girls, and laid the foundation not only for so-called nervous affections, but for organic disease. The author had had a few cases of locomotor ataxia in the history of which masturbation in early youth was found to have been the foremost cause. Spinal tabes from a pathological and a clinical stand-point was rather a protean form of disease. So far as his own observations went in those cases in which there was also a history of syphilis, benefit was derived from anti-syphilitic treatment, and in some cases the benefit was quite marked, but there had not been in any case a complete cure. Other authors, however, had reported a few cases in which the symptoms entirely disappeared under anti-syphilitic treatment. In cases in which a syphilitic history was present, prognosis so far as some degree of improvement in the symptoms was concerned was usually better than in other cases, but the therapeutic results, even in such cases, had fallen far short of the anticipations of the positivists.

Dr. Weber's experience with syphilis had convinced him of the importance of taking

the disease early in hand, and of following up the treatment persistently for years, if the individual wished to escape the tertiary effects of the disease, and among others the baneful influence which it often had upon the cerebro-spinal system. When a syphilitic history was present in a case of tabes, mercury should not be given by the mouth, but by inunction, the latter method being far more efficacious and speedy in its action. The following statistics were given, based upon his experience with syphilis. The whole number of cases treated was one hundred and thirty-four, of which number one hundred and fifteen were men, and nineteen women. None of them were under observation less than four years, and most of them eighteen to twenty years. The details of one case were given, the only case he had ever seen in which there was a distinct history of syphilis occurring twice in the same individual. The last initial lesion appeared five years after the first. Of the one hundred and thirty-four cases, eighteen—that is, 13.5 per cent.—had up to the present time presented symptoms of specific lesions of the cerebral nervous system; eight of the eighteen, of the brain alone. Six of the eight were men, two were women. Five cases were of the brain and spinal cord combined,—all men; five of the cord only,—four men and one woman. Two of the eight cases which had syphilis of the brain alone, died of cerebral symptoms. The other six were still alive, but not cured. Of the five cases of syphilitic affection of the cerebro-spinal axis, two succumbed to the disease; three were still alive. Of the five with spinal syphilis, one, a woman, died of syphilitic paraplegia; four were living, and were relieved after treatment.

Of tabes he had records of seventeen cases. The first case was a typical one of locomotor ataxia. There was no syphilitic history. The second case was a typical case of tabes involving the brain; in the history was venereal excess. Syphilis suspected. In the third case were rheumatic influences, but absence of syphilis. In the fourth case there was typical tabes, and absence of syphilis. In the fifth case the patient contracted syphilis after having had tabetic symptoms many years. Rheumatic influences were the most important in the etiology. In the sixth, a typical case of tabes, there had been venereal excess; syphilis suspected; rheumatic influences. The seventh was an atypical case, with a history of rheumatic influences, but not of syphilis. The eighth was an atypical case, early masturbation a presumable cause; no syphilis. The ninth, a typical case, died of complicating cardiac disease. Cause, early and long-continued masturbation; rheumatic influences; no syphilis. The tenth, of spinal type, cause venereal excess; no syphilis. The eleventh, a typical form, spinal type; rheumatic influences; no syphilis. The twelfth, a typical case, no syphilis; probably

venereal excess. The thirteenth, atypical case of lumbar type; syphilis played the most important, perhaps the only, rôle; improved promptly under anti-syphilitic treatment. The fourteenth, atypical case, nothing but rheumatic influences. Fifteenth, slowly progressive case of typical lumbar type; syphilis twenty years ago; venereal excess for many years. Improvement with galvanism and hydropathy. Sixteenth, typical case of tabes; early masturbation; later, long physical exercise; no syphilis. Improvement with galvanism and hydropathy. Seventeenth, a typical case of tabes, involving the entire cerebro-spinal system, terminating in dementia paralytica, of which the patient died. Undoubted history of syphilis.

The author drew the following conclusions:

First. There was not sufficient evidence to show that syphilis might be the direct cause of a typical form of locomotor ataxia,—that is, of posterior sclerosis of the cord.

Second. There was proof, and plenty of it, that syphilis produced certain lesions in the cord and its meninges as surely, if not as frequently, as in the brain, and that these lesions might be, and often were, followed by symptoms of tabes, and that they were generally relieved by prompt and energetic specific treatment, but rarely cured.

Third. Experience had shown him that the tendency of the syphilitic virus to produce lesions in the nervous centres occurred the sooner the less its course was interfered with by judicious and long-continued anti-syphilitic treatment. Older cases were more apt to develop neuroses than those of recent date.

Fourth. As shown by all observers, after syphilitic lesions of the cerebral nervous system were once established, they might often be relieved, but seldom, if ever, cured, by specific measures. Thus, we had reasons in cases of syphilis for insisting upon long-continued and timely treatment, and to keep accurate and judicious watch over the patient, and have specific symptoms attended to as early as possible.

Fifth. The inunction treatment with mercury in fresh cases of syphilis was the best means of reducing the disease to an early and harmless latency.

The PRESIDENT said that, for the purpose of bringing out some remarks on certain points, he would venture to detain the audience a few minutes by referring to three cases which had come under his care, and which were very vividly brought before his mind by the paper of the evening. Although the author had inferentially shown the value of therapeutic results in throwing light on the pathology, he had not emphasized this point in such a way as to the President's mind it had been emphasized by personal observation, especially in another class of disease. In brief terms he would mention three cases in which the therapeutic results had led him to believe,

and to feel a strong conviction, that the locomotor ataxia was the result primarily of syphilitic poison in the system.

The first case occurred in 1873, in the person of a young man, unmarried at that time, who sent for him on account of what he called rheumatism. He had been gradually finding that he could walk with difficulty; suffered from severe pains in the ankle-joints, symptoms which gradually increased until he was unable to walk, and at last there was complete paraplegia—entire loss of motion and sensation in the lower half of the body—and paralysis of the bladder and rectum. While he had been exposed to venereal trouble, there was no history of syphilis. Suspecting, however, that the trouble was of a specific nature, fifteen grains of the iodide of potash with a sixteenth of a grain of corrosive sublimate were given, the iodide being gradually increased until two drachms were taken daily. Within two months the patient began to regain control of the extremities and of the bladder and rectum; after two years he considered himself in excellent health, and got married, and had remained healthy since, until very recently, when he had bronchitis and suffered, as was stated, a good deal from his old rheumatism.

The second case was that of a man of 55 years, who had had syphilis in early life, but had remained in good health until the ataxic symptoms began to develop. He was put upon anti-syphilitic treatment, and recovered from the ataxic symptoms.

The third case was that of a surgeon in the late civil war, who two years ago began to suffer from difficulty in locomotion, and finally paralysis on the left side. He denied having had primary disease; but, being thoroughly convinced that his condition was due to syphilis, Dr. Barker gave iodide of potassium and corrosive sublimate, and, as in the other cases, the incidental treatment which symptoms might demand. At that time there was paralysis of one side, inability to articulate, and disturbance of the mind. The rapidity of recovery was marvellous: within one month he could walk, the appetite returned, he gained flesh, the mind cleared up, and he was now apparently perfectly well. It would be evident that the President referred to cases in which there were symptoms of locomotor ataxia, without attempting to draw a distinction as to types of the disease.

Dr. R. W. AMIDON wished only to put himself on record as one of those who were opposed to calling typical locomotor ataxia a syphilitic disease. Those who held the view that locomotor ataxia was due to syphilis generally founded their opinion upon statistical data; and, as shown by Dr. Birdsall in a paper before the American Neurological Society last summer, and by others, this was a doubtful foundation. Only about 9.5 per cent. of the cases, according to Dr. Birdsall's

statistics, showed a possible connection between tabes and syphilis. Dr. Amidon had never seen a case of locomotor ataxia, in which he felt satisfied there was sclerosis of the posterior columns of the cord, benefited by anti-syphilitic treatment. He thought that if we wished to acquire light on the subject we should have to look to pathological anatomy. If sclerosis of the posterior columns was syphilitic, it must be a tertiary lesion, and from what we knew of tertiary lesions he thought we could safely say they did not constitute a systematic lesion. Syphilis was more apt to attack the membranes than the substance of the brain and cord, and most authors agreed that in posterior sclerosis the contents of the nerve-tubules were first affected. The course of the disease was against its being syphilitic: it was slow and progressive, while the course of most tertiary lesions was rapid. What experience he had had, both in the way of treatment and study of the literature and the pathology of the disease, all went in one direction,—namely, against the theory that locomotor ataxia was a syphilitic lesion.

Dr. R. W. TAYLOR said he was already on record as an opponent of the theory, founded on statistics, of the causation by syphilis of locomotor ataxia, and he was very glad to hear the cautious manner in which Dr. Weber had handled the subject. He reviewed the statistical evidence offered by Fournier and others, and expressed his opinion that it was not well founded: Fournier, for instance, made a specialty of venereal disease, and naturally if a patient had syphilis and ataxic symptoms he would go to Fournier. Again, those statistics were largely retrospective, and not founded upon a critical investigation into the patient's past history. The lesions of syphilis, as Dr. Amidon had said, usually developed in the membranes of the brain and cord, and did not correspond with the pathology of typical tabes.

Dr. W. R. BIRDSALL heard only the last part of the paper, but said, with regard to the statistics which had been quoted from his paper, that there were forty-two cases of locomotor ataxia in which particular inquiry was made with regard to the presence or absence of syphilis. The number in which there was a syphilitic history was only four, or about 9.5 per cent. The average deduced from the statistics of various authors was about 43 per cent. While we should not ignore statistics, he thought that up to the present they were not sufficiently large to be of very definite value. Another fact might be mentioned,—that Erb did not recognize the duality of the venereal sore; and this would account in part for the large number of cases in which he found a syphilitic history. Still, it was somewhat remarkable, after all allowance had been made, that there should have been evidence of syphilis in so many of the cases reported by Erb and others. He himself was

disposed to think that syphilis might produce such an effect upon the nervous system as to predispose it later, like venereal excess, great fatigue, and other conditions, to spinal sclerosis. It also seemed to him that where there was an incipient sclerosis of the posterior columns syphilis coming on later might be made worse by it. An important point suggested by the President was with regard to what should be called locomotor ataxia. He believed that there was a great variety of affections of the cord in which there was locomotor ataxia as far as the symptoms were concerned, but in which there were also other symptoms, and other portions of the cord were affected than the posterior columns alone,—the lateral columns, for instance, in which there was a variety of other symptoms, which were often confounded with true sclerosis of the posterior columns. He believed that an anatomical division was an important one to make.

Dr. E. L. KEYES thought the statistical element could not be entirely ignored when so many men of intelligence and high position agreed to give it some weight. Although he did not believe that pure and simple sclerosis of the posterior columns, if there was a distinct pathological lesion of that kind which characterized pure locomotor ataxia, could or ought to be caused by syphilis, still he thought it perfectly possible that meningeal and progressive troubles in the lumbar columns and disseminated throughout, might be caused by syphilis, and might be attended by signs of locomotor ataxia. He mentioned one case in which there were unmistakable evidences of syphilis, and at the same time the patient suffered from paraplegia, wasting of the muscles of both lower extremities, inability to walk, paralysis of the bladder, etc. Under anti-syphilitic treatment the wasting of the limbs, and other symptoms of syphilis, disappeared, but the symptoms due to the ataxic lesions continued, and he died. Another case also he treated for syphilis, and cerebral symptoms due to the lesions of that disease disappeared. Since then distinct ataxic symptoms had appeared. He proposed to put the patient upon active treatment. He was inclined to attach some weight to the idea that pre-existing syphilis might be an active factor in the production of ataxic symptoms. He had seen two or three cases greatly improve under the use of iodide of potassium and inunctions of mercurial ointment. One patient took the treatment with the iodide of potassium badly, and a change was made to mercurial inunctions, etc., and he then markedly improved in the ataxic symptoms and in general health.

Dr. ALEXANDER McLANE HAMILTON thought a distinction should be made between posterior spinal sclerosis and cerebro-spinal syphilis. In the cases in which there were the classical symptoms of true locomotor

ataxia he had not found a history of syphilis in more than twelve per cent. In the irregular ataxic cases, however, in which there were head- and speech-symptoms, etc., syphilis played an important part, and these cases were greatly benefited by iodide of potassium, —if necessary given in very large doses, two or three hundred grains a day in a mild alkaline water.

Dr. F. N. OTIS thought we should not ignore the large statistics given by different authors, going to show the presence of syphilis in so many cases of locomotor ataxia. His own experience had been comparatively small, but it had led him to believe that locomotor ataxia could be more readily produced in the way in which some syphilitic troubles were produced than in any other way. Looking upon it as a disease of the connective tissues, a sclerosis from cicatrization of connective-tissue accumulation, producing strangulation of the nerve-fibres, it would be found that the disease which produced locomotor ataxia acted exactly as we knew syphilis to do, and in the same rotation. If it were said that anti-syphilitic treatment often had no effect upon tabes, it could also be said that it did not greatly affect certain syphilitic lesions which had gone to an advanced stage. He related a case in which the patient was sent by him to an eminent specialist in diseases of the nervous system, who pronounced his condition undoubtedly one of locomotor ataxia, and advised ergot, and, later, galvanism. As the ergot deranged digestion, Dr. Otis finally concluded to give anti-syphilitic treatment, and also divided a constricted meatus. The patient was soon able to walk with scarcely any difficulty, and his bladder-trouble almost entirely disappeared in a few weeks. He thought it safe always to try iodide of potassium and mercury, as it was perfectly safe to do so even for diagnostic purposes.

Dr. E. C. SPITZKA said an important point had been overlooked to-night,—namely, that syphilis undoubtedly affected the central nervous axis in its secondary period. He had known it in a few cases, and others had noted the same fact, to abolish the tendon reflex. If syphilis in the secondary stage was capable of producing this effect upon the nervous system, might it not produce the same effect in the tertiary period in the manner in which this symptom appeared in locomotor ataxia? It had been asserted that the lesions of syphilis were characteristic and distinct and had not been found in locomotor ataxia. He would deny that *in toto*. He believed it to be perfectly well established that syphilitic meningitis differed in no respect from ordinary meningitis, and most recent investigators upon the subject also denied that any marked line could be drawn in the lesions of locomotor ataxia. In his private practice, where he could rely upon the statements of his patients, he estimated that two-thirds of

the cases of locomotor ataxia had a syphilitic history. It had been shown in the discussion to-night that where there was a history of syphilis it nearly always occurred some years before the development of locomotor ataxia, and this we would expect, for if specific disease could give rise to tabes it would do so in its tertiary stage. Again, locomotor ataxia occurred more commonly in that class of the population where syphilis was most frequent,—namely, among the inhabitants of cities. He was of the opinion that syphilis was the etiological factor in about one-third of the cases of locomotor ataxia.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held March 26, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

WEIGART'S METHOD OF STAINING THE CENTRAL NERVOUS SYSTEM FOR MICROSCOPICAL EXAMINATION.

Dr. T. M. PRUDDEN presented some specimens of the spinal cord, a part of which illustrated the lesions of locomotor ataxia, stained with acid fuchsin or the sulphate of rosanilin, after the method of Weigart, of Leipsic, a method which had not yet come into common use in this country and England, or even in Germany. It was of special advantage in studying the nervous system. All the parts were stained alike red by the agent, but afterwards when treated with a dilute solution of caustic potash the color was destroyed in some of the elements sooner than in others. The axis-cylinders retained the color longer than other parts, and in some of the specimens presented they could be very distinctly seen as red lines standing out on a colorless background. The reagent had to be quite pure, and he had been unable to obtain any in this country which would answer the purpose.

COLLOID CANCER OF THE PERITONEUM.

Dr. H. N. HEINEMAN presented the specimen on account of its great thickness and extent. The portion of peritoneum presented which had undergone colloid degeneration was more than two inches in thickness. The patient was 40 years of age. There was no clinical history.

SACCULATED EMPYEMA.

Dr. HEINEMAN also presented a specimen removed from the body of a man who died the evening before at the Mount Sinai Hospital, having been admitted March 15. He was 45 years of age. The health began to fail a year ago, and he suffered more or less from dyspnoea and cough with mucopurulent expectoration. A short time previous to admission he was seized with shortness

of breath, pain, muco-purulent expectoration, a severe chill followed by sweating, and afterwards almost regularly every afternoon there was rise of temperature and sweating. The cough and dyspnœa increased, the health rapidly failed, and he was obliged to cease work. His physician treated him for pneumonia. After admission the afternoon temperature during the remaining days of life varied between 102.5° and 104° F., the pulse rapid, the respiration from 48 to 50; there was a less elevation of the morning temperature. He continued to grow weaker, and three days before death œdema set in, and death took place from asthenia and œdema of the lungs. At the autopsy the pleura were found thickened and adherent, and on one side enclosed two sacs, non-communicating, filled with pus, and another similar sac at the diaphragmatic portion. There seemed to be no channel by which the pus contained in the three separate cavities could have gotten to the bronchi. The other lung was emphysematous and the seat of chronic bronchitis. The heart was somewhat fatty, the aortic and mitral valves thickened, the kidneys the seat of slight chronic diffuse nephritis. It would be interesting to know just how the pleuritic lesions took place. Dr. Heineman thought it probable the man had had empyema, which tended towards recovery, but that relapses took place and pus was enclosed between the adhesions, forming the cavities referred to.

Dr. E. G. JANEWAY had seen two similar cases during the present year. One followed pneumonia. The house surgeon would draw off about four ounces of pus from one sac, and, failing to get more at that locality, would insert the needle at another point and draw off perhaps four ounces more, and in this way the presence of several pleuritic sacs separate from one another and containing pus was demonstrated. A second case began with hydro-pneumothorax, and the patient finally recovered. In a third case, in which an autopsy was made last week, hydro-pneumothorax had developed quite suddenly.

HORSESHOE KIDNEY THE SEAT OF CHRONIC DIFFUSE NEPHRITIS.

Dr. F. FERGUSON presented the specimen, which was removed from the body of a man who was brought to the hospital on the 18th of January, with the statement that he had been suffering for three or four days with dyspnœa, and had been using opium for the last five years. At that time he was taking fifteen grains daily. The dyspnœa on admission was extreme. The urine contained thirty per cent. of albumen. The aforementioned lesion was found.

CONGENITAL ABSENCE OF THE LEFT WING OF THE DIAPHRAGM.

Dr. FERGUSON presented the specimen,

removed from the body of a colored infant at the Morgue. The stomach, the left lobe of the liver, and the greater part of the small intestine and cæcum, were all in the left pleural cavity.

ABSENCE OF THE CORPUS CALLOSUM.

Dr. FERGUSON presented the specimen, in which the corpus callosum was found divided throughout its entire length, and the hemispheres were united at this locality only by the presence of the pia. The patient was about 45 years old, was very small, and died intoxicated. No further history was given.

HEMORRHAGE INTO THE PONS.

Dr. FERGUSON also related the following case, and presented specimens. The patient was brought to the hospital by the ambulance on the 16th of March. He had worked out of doors. The friends said he had been paralyzed for twenty-four hours and become comatose. The surface was dry, the muscles relaxed, the pupils equally contracted and irresponsive to light; the bladder was distended with urine, which was withdrawn and was found to contain 10 per cent. of albumen; the temperature was 100° F., the pulse 80, the respiration slow and stertorous. Pilocarpin and hot-air baths failed to produce diaphoresis. The patient partially recovered consciousness. The reflexes were lost in the afternoon. The patient died on the same day. At the autopsy the ordinary lesion of chronic diffuse nephritis was far advanced, and the condition of the heart invariably associated with chronic diffuse nephritis was present. A considerable hemorrhage was found in the pons, raising the pia mater within the ventricle and between the medulla and the lobes of the cerebellum. It was only the second instance in which Dr. Ferguson had seen hemorrhage in this locality.

Dr. HEINEMAN recalled a case in which Dr. Alonzo Clark had diagnosed absence of a part of the diaphragm from the tympanitic resonance given by the intestines within the thoracic cavity.

Dr. AMIDON said Dr. Wilder had presented the brain of a cat at the American Neurological Society, in 1883, in which there was absence of the corpus callosum, and referred to the case of a man in which there was a similar abnormality, and it had only been recorded of him that he was very profane and quarrelsome.

Regarding the fourth specimen, Dr. JANEWAY said it was commonly noted in books on diagnosis that the presence of albumen in the urine was one of the evidences of uræmic coma versus coma due to cerebral hemorrhage. As a matter of fact, however, it was quite common to find Bright's disease and albuminuria present in cases of cerebral hemorrhage.

CHRONIC PROLIFERATED PERITONITIS.

Dr. L. H. SAYRE presented the specimen for Dr. L. A. SAYRE, and read the history. The patient was 66 years of age, a large and robust man, always healthy until 1876, when he suffered from a severe attack of pleuro-pneumonia, after which he was never entirely well. Two years later he fell and sustained a severe concussion of the spine, followed by complete paralysis of the lower extremities and bladder, symptoms which shortly disappeared. In 1879 he fell again from a hammock, and afterwards suffered from intense pain across the stomach, extending over the abdomen, pointing to acute peritonitis. For the remaining six years of life he took daily hypodermic injections of morphine, to relieve pain. Swelling of the limbs and ascites developed, and a number of times tapping was performed and large quantities of fluid were withdrawn. Only once or twice was a trace of albumen found in the urine. The quantity of urine passed daily since 1879 gradually diminished from year to year, until during the last forty-eight hours of life it amounted only to seven ounces, and the patient died of uræmia. Dr. Welch made the post-mortem and microscopic examinations, and, in addition to the lesions of peritonitis, found lesions in the heart, pericardium, lungs, pleura, liver, spleen, kidneys, and bladder, and atheromatous degeneration of the arteries. The brain and cord were not examined.

DIPHTHERITIC DYSENTERY FOLLOWING LABOR.

Dr. E. G. JANEWAY presented the large intestine the whole length of which was involved by diphtheritic inflammation, probably of not more than four days' duration. The interest of the case was that it should happen just after confinement. The woman was 23 years of age, a domestic, who was delivered of her first child on March 18, at 6 P.M., labor being normal and lasting six hours. The temperature on the following morning was 99° F., and remained at that point until the afternoon of the second day, when it suddenly went up to 104.4°, and the uterus, which had contracted down well after delivery, increased to a large size, extended above the umbilicus, and was flabby. There was a discharge from the vagina, somewhat colored, which was increased by pressure upon the uterus. There was no perceptible odor. Intra-uterine douches of bichloride solution, one to two thousand, were given, when the temperature rose. On the night of the 22d she had a number—perhaps eight—of diarrhoeal movements, which were afterwards controlled by suppositories of opium on the last day of life. Although the temperature continued high and the heart beat comparatively strong, there was no pulse at the ankle or wrist, and the hands were cold. She had taken full but

not excessive doses of ergot; she had had morphine, whiskey, and quinine. There was at the autopsy found to be some diphtheritic endometritis and some patches on the vagina, but the lesions were not so striking in the genital tract as in the large intestine. There were no other lesions except slight parenchymatous nephritis and a large, soft spleen. The case was interesting as showing that in some of these cases the intra-uterine injections will not touch all the disease. In this case the lesions in the intestine had the appearance of being older than those in the uterus. It was further interesting as illustrating a point which Dr. Janeway had frequently marked,—namely, that simple inspection of the discharges will not always enable us to determine the absence of a serious diarrhoeal disease, and even should a little blood or a few clots be found in the stools after pregnancy they might readily be attributed to the lochia.

TUBERCULAR PLEURISY.

Dr. JANEWAY also presented a specimen removed from a patient who had suffered from tubercular pleurisy with absence of tubercles in the lungs and other portions of the body.

DEATH FROM PERITONITIS WITH OBSCURE SYMPTOMS.

Dr. J. LEWIS SMITH was called to see a woman on the 16th of March with the history that during two months she had suffered from a dull, aching pain low down in the abdominal cavity on the right side. Just before he saw her the pain became more intense, and extended over the abdomen. He found general tenderness over the abdomen, most marked in the right iliac region. The temperature, however, was normal, and the pulse not accelerated. Thus peritonitis seemed to be excluded. The temperature was normal also on the following day; no marked acceleration of the pulse; the respiration normal. On the next day she vomited occasionally; the temperature was elevated, but not more than two degrees, and during her whole sickness the temperature did not rise above 102.5°; the pulse about 100. Her monthly flow took place about a week ahead of time, which was attributed to poulticing. Perforation of the appendix was thought of, but she stated that she had had similar pains before at the time of the monthly period, and the symptoms seemed to exclude peritonitis. Some days passed, the symptoms remaining about the same, until suddenly she went into collapse and died. There had been no meteorism. Opening the abdominal cavity, fetid pus was encountered of exceedingly disagreeable odor, which had escaped from a ruptured abscess, and a perforation was found near the middle portion of the vermiform appendix, the walls surrounding presenting a gangrenous appearance. The intestines were matted together by

very intense recent adhesive inflammation. It seemed very plain that for two or three months there had been an abscess, probably due to inflammation excited by a foreign body in the appendix. The odor was so offensive that it prevented a search for the foreign body. Dr. Smith said that in nearly all the cases of perforation of the appendix which he had seen it had occurred near the middle, and not at the extremity. Had the diagnosis been made early enough, the patient might possibly have been saved by opening the abscess from without. Dr. Smith remarked that he once witnessed a case in which the patient died a few days after labor, and it was found that there had been rupture of a perityphlitic abscess started by a baked bean within the appendix.

Dr. FERGUSON had seen a case in which the extremity of the appendix was necrotic.

Dr. W. M. CARPENTER said it had been stated by one physician that the extremity of the appendix in those cases in which a foreign body entered it had previously become bound down in an abnormal position, giving more ready access to foreign material from within the intestine. He had not been able to confirm the statement.

Dr. JANEWAY said it was a mistake to suppose that the vermiform appendix, the seat of a foreign body, always perforated very easily. He had seen one case in which it had become distended to the size of a child's head, and in another to the size of a Bologna sausage.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, FEBRUARY 22, 1884.

The PRESIDENT, HENRY BEATES, JR., M.D., in the chair.

AFTER the reading of a paper on "Infantile Palsy" (see page 501), by G. Betton Massey, "A Case of Puerperal Eclampsia in a Primipara of Eighteen Years of Age" was reported by Dr. JAMES B. WALKER:

Mrs. H. P., primipara, 18 years of age, of full habit, short stature, florid, and always healthy; had been under observation for about six weeks prior to labor. The urine had been repeatedly examined, with negative results. Had had but little nausea during the early months, and absolutely no bad feelings otherwise until about a week prior to labor, during which there was considerable general itching of the surface of the body. There was no jaundice. The feet were very slightly cedematous during the last two or three days. She was directed during the last two or three weeks to eat sparingly, for her appetite was keen; but I doubt if the advice was very influential in shaping her practice.

On the night preceding December 20, 1883, she slept but little, having pains in the back of slight severity. About 5 A.M. I was called, and found that the bowels had been freely

and voluntarily moved, and that she had been freely micturating at short intervals all night.

The os was fully dilated by 10 A.M., and the pains of the second stage commenced, the child presenting in R. O. P. (fourth position), and the bag of waters unbroken. The head was still freely movable at the superior strait, and not forced down into the pelvis, as is natural in primiparæ even at the commencement of labor, when pelvis and child bear normal relations to each other, both as to position and quantity. During the earlier "pains" of the second stage the child's head was altered, and the anterior fontanel presented in centre of strait, the brow under symphysis pubis; the occiput had ascended posteriorly, carrying the posterior fontanel out of reach. This was corrected by carrying the brow above symphysis and forcing it around to the left, with two fingers to the sides of the head, when the occiput again presented in the fourth position. The head being large and the young patient being scarcely fully developed as yet, descent was very slowly made, delays marking each stage of progress, the pains, except when the head was at the vulva, being short-lived. A mixture of ether, alcohol, and chloroform, in three, two, and one parts respectively, was allowed during some of the severer pains of the second stage.

The head was delivered at 2.30 P.M., by enucleation, during an interval of "pains," without injury to the perineum. During the delivery of the head and the last two or three pains prior to its delivery, the patient became considerably excited, although easily controlled.

The cord being tied, attention was addressed to the uterus and its contents. The secundines were removed easily by the Crêdé method, and just as they escaped from the vulva my attention was directed to the patient's head, which was slightly turned to the right, with the eyes markedly in the same direction and fixed. I spoke to her, but she did not notice it, and I at once administered the chloroform mixture. The convulsive movements were altogether confined to the neck and face, the extremities not participating, and the facial movements being very slight. Loss of consciousness was, however, complete. No stupor succeeded. A hypoderm of one-fourth grain of morphia was at once administered, and a dose of potass. brom., gr. xx, and chloral, gr. x, given.

In a half-hour, while patient was sleeping, a second convulsion, about equal in mildness to the first, occurred. This was at 3 P.M. The chloral and bromide mixture was now repeated, and continued every two hours, and alternated hourly with one of bromide of potass., acetate of potass., and mist. potass. citratis. The urine, on being drawn with a catheter at 4 P.M., was very slightly albuminous. The patient continued quiet, doing

nicely,—sleeping under the medicines, but rational on waking,—until 7.30 P.M., when a short visit from her somewhat boisterous father, made without advice, excited her, and a third convulsion, general in character and of decided severity, occurred. This, though short-lived, was followed by coma. A second hypodermic of one-fourth grain of morphia was now given.

I now requested counsel, and Dr. Tyson was sent for. He arrived at 8 P.M., just as the patient went from her comatose condition into the fourth convulsion, which was about equal in severity to the third. Her face was florid; pulse 120, and not very full; temperature 100.2° F.; and, as she had lost but a small amount of blood with the labor for one so full of it, bleeding was decided upon, and she was bled from the right arm two full pints. The blood flowed very freely and clotted firmly, leaving but little serum. Stupor lessened after this, but consciousness did not return, though she swallowed what was given her to take, consisting of the medicines above mentioned and water freely given after each dose, as had been practised from the time of the first convulsion. Elaterium was administered in quarter-grain doses every three hours till purging induced. Free purgation followed the third dose. Digitalis was given after the bleeding, and repeated in ten-drop doses every hour for the first fifteen hours; then, as the pulse had dropped to ninety-six beats, five drops every hour for twelve hours; and after that to convalescence ten drops four times a day. A large poultice of flax-seed-meal was applied to the loins.

A fifth convulsion occurred at 11 P.M., three hours after the last, and about equal to it in severity.

Urine was now drawn by catheter and found *densely* albuminous. The following morning it was still *densely* albuminous, and urates were copiously precipitated on its cooling. No further convulsions occurred. The urine, drawn by catheter every four hours, showed no change in albumen until Saturday night, when it was notably lessened.

On Friday P.M., microscopic examination of urine drawn in the morning showed blood-corpuscles and a few coarsely granular and hyaline casts.

None of the chloral mixture was given after 4 P.M. on Friday, but the bromide and acetate mixture, with digitalis, was continued in diminished doses until Saturday noon, after which a potash mixture, without bromide, was given for several days, with digitalis, as already mentioned.

By Saturday noon, in response to questions as to her feelings she would attempt to answer, but, failing to get the word she wished, would seem puzzled. Mental effort was prohibited. Absolute quiet enforced from the commencement. The babe, which had been sent to a distant room after the first convul-

sion, was fed artificially until Saturday P.M., when, as the breasts were enlarging, it was allowed to nurse and at once removed. On Sunday it nursed every four hours, but was not allowed in the room in the intervals until Wednesday. On Monday and thereafter it was nursed every two hours during the day-time.

Complete consciousness returned Sunday noon, after a quiet, refreshing sleep of several hours.

The urine secreted on the days succeeding labor amounted to about twenty ounces in the twenty-four hours, still containing albumen and urates, but in diminishing amounts, until Friday, the 28th, when not a trace of albumen was present. It had now increased to about thirty to thirty-five ounces in the twenty-four hours. It was repeatedly examined, during the next three weeks, both for albumen and for tube-casts, with uniformly negative results.

Patient first expressed desire for food on Monday, the 24th. Milk and beef-tea were administered on Sunday, 23d, and thereafter.

Thursday, 27th, she expressed a desire to sit up, and was surprised at not being permitted to, as she felt so thoroughly well. She has had no trouble since, having made a rapid and complete convalescence, and exhibits a worthy pride in her bouncing girl baby.

In reviewing this case, several points present themselves for consideration. Had I had reason to anticipate convulsions, I would have given anæsthetics more freely during the labor, and would have delivered with the forceps earlier, thus avoiding the long, tedious strain on a nervous system still possessing somewhat of the convulsibility of childhood. But, as I had repeatedly examined the urine, even within a few days, without result as to albumen, I did not anticipate renal trouble; and, further, urine was voided frequently and in proper quantity up to the commencement of the second stage, four and a half hours before the termination of the labor. Query: Was the cutaneous itching suggestive of retention in the blood, and attempted elimination by the skin, of materials of tissue-metamorphosis which should have been removed by the kidneys? and, if this symptom exist in a case, especially in a primipara, should it be considered suggestive of a danger of convulsions? and, thus forewarned, may the physician be forearmed, even in the absence of albuminuria?

Again: Had I administered a nitrite and induced uterine hemorrhage (which I tried to favor by omitting ergot and ceasing palpation of the uterine globe), might I have prevented further convulsions?

The necessity and advantage of absolute quiet were both illustrated by this case. I feel sure, from the manner the patient was improving, that the third convulsion would not

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THE ONLY PEPSINE USED IN THE HOSPITALS OF PARIS FOR THE LAST 30 YEARS.

Unlike the various substitutes which, in most cases, are but unscientific or incompatible compounds, forced upon the medical profession as aids to digestion by extensive advertising, but which, when submitted to the proper tests, are found to be useless as digestive agents, Pepsine is constantly gaining in the esteem of the careful practitioner.

Since the introduction of Pepsine by Boudault and Corvisart in 1854, the original BOUDAULT'S PEPSINE HAS BEEN AT ALL TIMES CONSIDERED THE BEST, as is attested by the awards it has received at the Expositions of 1867, 1868, 1872, 1873, in 1876 at the Centennial Exposition of Philadelphia, and in 1878 at the Paris Exposition.

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BOUDAULT'S PEPSINE is prepared in the form of Pepsine Acid and Pepsine Neutral. It is sold in bottles of one ounce, with a measure containing exactly five grains; also in bottles of 4, 8, and 16 ounces for dispensing.

BOUDAULT'S WINE OF PEPSINE.

Formula of Dr. Corvisart.

The taste of Pepsine being perfectly disguised in this Wine, it may be recommended to persons who have difficulty in taking Pepsine in the form of powder. This Wine is tested so that a tablespoonful of it is equal in digestive power to ten grains of Boudault's Pepsine in powder. Sold only in bottles of 8 ounces.

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TANRET'S PELLETIERINE.

FOR THE TREATMENT OF TAPE-WORM (TÆNIA SOLIUM).

This New Tænifuge, the Active Alkaloid of Pomegranate Bark, has of late come into extensive use in France for the treatment of Tape-Worm (Tæniasolium). The results of numerous experiments with it at the Marine Hospitals of Toulon, St. Mandrier, etc., and in the Hospitals of Paris, St. Antoine, La Charité, Necker, Beaujon, etc., have all been most satisfactory. Dr. Dujardin-Beaumetz, Member of the Academy of Medicine, and Prof. Laboulbène, in their report to the Society of Therapeutics, have given it their unqualified approval after the most searching experiments. This preparation is pleasant to administer, and if certain preliminaries are observed success will be insured. Sold only in bottles containing one dose.

TANRET'S ERGOTININE.

ALKALOID AND ACTIVE PRINCIPLE OF SPURRED RYE.

This is a well-defined alkaloid that must not be confounded with Ergotine or other extracts. It is given in doses of from $\frac{1}{4}$ to $\frac{1}{2}$ milligramme (1-240th to 1-120th of a grain) in all cases where Ergot is indicated, viz., Flooding, Post-Partum Hemorrhages, Metrorrhagia, etc., etc. It is put up in the following forms:

Syrup, containing $\frac{1}{4}$ milligramme to each teaspoonful; Dose, from 1 to 6 teaspoonfuls per day.

Solution, for hypodermic purposes, containing 1 milligramme to each cubic centimetre; Dose, from 3 to 10 drops.

The Institute of France has awarded one of its prizes to Mr. Chas. Tanret for the discovery of these alkaloids.

Tanret's Pelletierine and Ergotinine are only prepared by Mr. Chas. Tanret, Laureate of the Institute of France, 64 Rue du Rempart, Paris.

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DRAGÉES, ELIXIR, AND SYRUP OF IRON.

"The experiments made in the hospitals of Paris have demonstrated that Dr. Rabuteau's Dragées, Elixir, and Syrup regenerate the red globules of the blood with a rapidity never observed with the use of the other ferruginous preparations. These results have been proved by the various *Compte-Globules*."

"The ferruginous preparations of Dr. Rabuteau do not cause any constipation, and are perfectly tolerated by the weakest persons."—*Gazette des Hôpitaux*.

Dr. Rabuteau's Elixir is prescribed when some difficulty is experienced in swallowing the Dragées; it is especially adapted to weak persons whose digestive functions need strengthening or stimulating.

Dr. Rabuteau's Syrup is especially prepared for children, who take it readily because of its agreeable taste.

A sample of Rabuteau's Dragées will be sent free to any physician mentioning THE PHILADELPHIA MEDICAL TIMES.

Prepared by CLIN & CO., Pharmacists, Paris.

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SARCO-PEPTONES!

(σαρξ, σαρκοῦ—flesh; πεπτω—I digest.)

RUDISCH'S EXTRACT OF PEPTONIZED BEEF.

We desire to state to the medical profession that

WE HAVE ASSUMED THE AGENCY

for the sale of the above important preparation, and that we have on hand for distribution, *gratis*, a limited number of samples which we shall be pleased to furnish to physicians who may favor us with their addresses.

This preparation perfectly meets the modern idea of an artificially digested food, as well as that of an extract of meat, being rich in nitrogenous matter in the form of **Peptones** derived from the **Albumen** of the meat.

"**SARCO-PEPTONES**" contains not only *all the extractive substances*, organic and inorganic salts of the beef, but also *most of its albuminous* portion converted into a soluble and easily assimilable form, known in Physiology as **Peptones**.

SARCO-PEPTONES cannot be compared either with beef-tea or with the commercial beef extracts after Liebig's formula, for whilst this preparation is a **Food** in the same sense as beef is, the best authorities, including Baron Liebig himself, have demonstrated that Liebig's Extract is only a **Stimulant**.

No foreign matter is incorporated with **SARCO-PEPTONES**, as it would only serve to dilute the extract. For this reason it is one of the *cheapest* products of its kind ever put on the market.

One part of **SARCO-PEPTONES** corresponds in nutritive value to *eight parts* of fresh beef.

All the objectionable features of artificially digested meats heretofore offered to the profession and the public have been overcome in **SARCO-PEPTONES**, owing to the special method of preparing the same.

The superiority of **SARCO-PEPTONES** consists in :

I. **The Large Percentage of Peptones which it Contains.**—There are 35 per cent. of Peptones, beside other nitrogenous substances.

II. **Its Absolute Purity.**—It is diluted with no foreign matter whatsoever, but contains only such as is derived from the meat itself.

III. **Its Uniformity.**—The method of preparing this product is such as at all times guarantees its uniformity.

IV. **Its Palatability.**—The taste of this preparation is such as to be acceptable to the most fastidious patient.

V. **Its Perfect Solubility in Water.**—Sarco-Peptones will dissolve at once in boiling water ; and in a comparatively short space of time, in cold water.

The process of digestion has been partially accomplished in the preparation of this article, hence the *weakest stomach* will be able to assimilate it.

Therefore, **SARCO-PEPTONES** may be employed as a remedy in ANÆMIA, EXHAUSTION, INDIGESTION, FEVERS, etc., and in all cases of *convalescence* as well as *by the healthy*.

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have occurred had her father not made his boisterous visit. And I am equally certain that the absence of the baby from the room, and other methods of enforcing quiet, aided materially the quiescence of nerve-centres, and thus avoided further dangers.

Still again: What is the pathology, so far as the renal tissue is concerned, of such an attack? I do not believe it to have been acute inflammation of the renal tissue, or, in other words, acute Bright's disease. I rather look upon these cases as due to acute renal congestion. I have no doubt that many cases, perhaps the majority, of primiparæ, have the same condition, but, in the absence of the essential amount of emotional excitement, the convulsions do not occur, the retention of excrementitious substances adding to the convulsibility, but not being in itself sufficient to induce convulsions. That such cases as I have described may develop Bright's disease in its chronic form, I have no doubt; and I think we cannot be too guarded in protecting against muscular efforts and exposures incident to early getting about after lyings-in accompanied by convulsions of this character, even though Bright's disease have not pre-existed. I would even restrict the amount of animal food ingested, especially of meats, for some days after other contra-indications for them have passed, on account of their known (or shall I say apparent?) influence in favoring the dropsies and hence renal difficulties following scarlet fever.

The case illustrates the advantage of blood-letting, I think, in a marked degree. Other measures for placing centres at rest and establishing the renal function were failing, and the patient was fast passing into a coma which required but a few more repetitions of the convulsions to deepen into death.

The slow reaction of the kidneys, which for at least five days thereafter, despite the potassium salts and digitalis and the copious injection of water, amounted only to twenty ounces in the twenty-four hours, proved to me how futile these measures would have been, unaided by the blood-letting, in controlling the convulsions.

(Discussion will appear in our next issue.)

AINHUM.—Dr. L. A. Duhring (*American Journal of the Medical Sciences* for January, 1884) reports a case of ainhum, of which but few have been reported in our country. Its geographical distribution includes chiefly the west coast of Africa, and certain localities in South America, more particularly Bahia, Rio de Janeiro, and Buenos Ayres. As the disease becomes better known, it will, doubtless, be found that it is met with throughout our Southern States, though probably as one of the rarer diseases. Appended to the paper is an exhaustive study of the microscopic appearances.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF ORAL SURGERY: BEING A TREATISE ON THE DISEASES AND SURGERY OF THE MOUTH, JAWS, FACE, TEETH, AND ASSOCIATE PARTS. By JAMES E. GARRETSON, M.D., D.D.S., etc. Illustrated with Numerous Steel Plates and Wood-Cuts. Fourth Edition, thoroughly revised, with Additions. Cloth, 8vo, pp. 1037. Philadelphia, J. B. Lippincott & Co., 1884.

This valuable work of Prof. Garretson appears in its fourth edition in an enlarged and more complete form, every part showing careful revision, while in many points such additions have been made as to constitute it a real encyclopædia of oral surgery. Its sixty-seven chapters contain a *résumé* of the subject of dentistry and allied subjects, making it useful both as a text-book for students and a work of reference for medical practitioners. Commencing its consideration of the subject with the anatomy of the parts concerned, it proceeds to dental physiology, the lesions of first and second dentition, anomalies, pathology of dental caries, and dental therapeutics. The various procedures of operative prosthetic dentistry are taken up systematically in several chapters, in which the instruments and methods of use are very fully figured and explained. Diseases of the face, nose, mouth, and pharynx are then rapidly reviewed, including skin affections, neuralgia, and morbid growths. The work concludes with a comprehensive chapter upon anæsthesia and two upon inflammation and diagnosis, the latter being written especially for students, who will find in them much that is suggestive and useful.

The work is abundantly illustrated, the cuts varying in style, in execution, and in value: some seem to be unnecessarily introduced. Figs. 70 and 71 are the same as 104 and 105, and Figs. 51 and 52 are identical with 264 and 265; but this may have an especial convenience to students. The statement that Fig. 105 (page 269) represents the "typical American mouth" we feel inclined to take exception to, as it represents only the superior dental arch, and contains only two incisors, the lateral incisors being absent: this condition certainly cannot be so common as to give it a typical character. We regret that its author, in the chapter on anæsthetics, has not taken positive grounds against the use of chloroform by dentists; and we cannot endorse the statement that this agent may be given with safety in the sitting position if there is no evidence of heart-disease present in the patient. This is dangerous doctrine, for, apart from the difficulty in recognizing the existence of a fatty heart (which only an expert physician could pronounce upon), there is abundant evidence that chloroform can kill suddenly by its direct

action upon the cardiac tissues, even when the heart is to all appearance healthy. Dentists should take it as an axiom that the habit of administering chloroform with the patient in a sitting posture must sooner or later lead to a coroner's investigation; and coroners at the present day do not look upon the administration of chloroform with a great degree of favor. In this opinion they have the support generally of the medical profession. No chloroform in dentistry, and as little of it as possible in general surgery, is the only safe rule; for, no matter how much care be exercised, accidents will occasionally happen.

LEGAL MEDICINE. By CHARLES MEYMOTT TIDY. Vol. III. New York, William Wood & Co., 1884.

This book is the continuation of the medico-legal treatise, by Dr. Tidy, already noticed as to its first two volumes in this journal. The present volume treats of all matters related to the function of reproduction, and also of asphyxia and the various forms of death in which it occurs. The portions treating upon sexual crimes and allied questions seem to us very full, but we notice that the author has apparently never seen the article upon the age-limits of fertility in the female, published in the *Philadelphia Medical Times* some years since, by Dr. Fordyce Barker,—an article which is almost unrivalled in the literature of its class. A very important feature of this volume, as of the other two, is the long analytical lists of illustrative cases, which make the book valuable not only as an authority which may be studied and quoted from, but also as a work of reference out of which may be cited that which is so dear to the heart of the legal mind,—namely, cases.

H. C. W.

GLEANINGS FROM EXCHANGES.

CLINICAL HISTORY OF A CASE OF RECURRENT DROPSY OF THE LEFT MIDDLE EAR, COMPLICATED, AFTER EIGHT YEARS' DURATION, BY AN ACUTE ATTACK OF MONOCULAR OPTIC NEURITIS (CHOKED DISK). ON THE SAME SIDE, FOLLOWED BY GENERAL TABETIC SYMPTOMS.—Drs. Burnett and Oliver record (*American Journal of the Medical Sciences* for January, 1884) a very rare case, which is as yet unfinished. They enumerate the four following factors of disease as being the cause of the patient's condition:

First. The early appearance in life of a polypoid growth in the right ear, which, upon being extracted, caused obliteration of the right auditory canal, and destruction of the contents of the middle ear. A partial loss of motility of the facial muscles upon the same side took place at the same time through peripheral traumatism, although this was not

of sufficient moment to cause interference with their electrical reactions.

Second. A chronic catarrhal inflammation of the left middle ear, of an exceedingly rare and almost unique type,—the peculiarity consisting in the formation and the retention of a sero-mucous fluid within the tympanic cavity, which required frequent evacuation,—each operation being productive of a marked increase in audition; the tendency to the accumulation of the liquid at last ceasing, with a return of the power of hearing to a relatively normal standard; this being purely local in origin.

Third. This conclusion is divided into two probable conditions, there not being any proof of an individual or a combined existence.

A. A chronic pachymeningitis, limited to the anterior two-thirds of the left base, involving a few of the nerve-sheaths at their foramina; causing subvaginal œdema, with consecutive neuritis and partial atrophy.

B. A new growth, very chronic in its development and course, situated in any part of the brain. The neoplasm causing pressure in all directions, with accidental passage of arachnoidal fluid through a few of the weaker foramina into the outgoing nerve-sheaths; this serous exudation producing incomplete choking of the nerve, followed by inflammation and atrophic degeneration.

Fourth. Sclerosis of the posterior columns of the spinal cord; the disease having advanced as far as the beginning of the stage of full development, without complication or extension of morbid process.

CASE OF FRACTURE THROUGH THE ANATOMICAL NECK OF THE HUMERUS, WITH COMPLETE SEPARATION AND DISLOCATION OF THE HEAD OF THE BONE INTO THE AXILLA, WITH ITS SUBSEQUENT REMOVAL.—Dr. Thomas G. Morton reports an interesting case in *The American Journal of the Medical Sciences* for January, 1884, in which the line of fracture was directly across the anatomical neck, where some capsular tissue remained attached. The humerus showed considerable absorption and rounding off at the seat of fracture, but the joint was otherwise uninjured. The removal of the head of the bone was deemed advisable, as it was acting as a foreign body. A good result was obtained.

CONVENIENT WATER-TEST.—Dr. E. Gregory commends the following test. Make a solution according to the following formula:

Liq. potassæ, parts 70;

Aquæ destillatæ, parts 90;

Potassii permanganat., part 1, by weight.

This solution is to be kept in a colored glass hydrocyanic acid vial with a glass stopper. In applying the test, two test-tubes are to be taken of about four inches in length by half an inch in diameter. These are each two-thirds filled, one with the water to be tested,

and the other with some standard water of known good quality. Into each is dropped one minim of the test-solution and thoroughly mixed. The tubes are then to be stopped with cotton-wool and set aside in the rack, with a sheet of white paper behind them. The freedom of the water from organic impurity seems to be in direct proportion to the time it retains the pink color of the permanganate. A water of average good quality should keep its color well for forty-eight hours. If decidedly paler in twenty-four hours, it is not fit for use. A very slight precipitate occurs in good potable water.—*Druggists Circular*.

ARTIFICIAL COUMARIN.—Coumarin is the odoriferous principle of the tonka bean, woodruff, sweet-smelling grass, and other plants, which owe their aroma and value exclusively to the coumarin they contain, the other principles being not only valueless but disadvantageous. Coumarin has now been made artificially. One method of preparation is by warming sodium salicylaldehyde ($\text{NaC}_7\text{H}_5\text{O}_2$) with an anhydrous acid, or by boiling salicylaldehyde with sodium acetate and anhydrous acid. Recent improvements in the process have greatly shortened the time and expense.—*Pharmaceutical Journal*, September 8, 1883; from *The Practitioner*.

LONG INCUBATION OF VACCINATION.—In the *Druggists' Journal* (Philadelphia) for January, 1884, is reported a case in which a vaccination with bovine virus did not produce any effects until nine months and two weeks, when a typical vesicle appeared, which then went through the regular stages, both local and general, of an ordinary vaccination. The patient was a man who had never been vaccinated before, but consented to be vaccinated when his children were; but although the others, upon whom the same virus was used, passed through the usual course, his case was apparently unsuccessful until the lapse of time already stated, when he came to the physician with a characteristic sore arm.

IODOFORM SUPPOSITORIES FOR PILES.—The following recipe for suppositories for hemorrhoids is from the *Zeitschrift für Therapie*:

R	Iodoform		4 parts.
	Balsam Peru		8 "
	Cacao butter	} of each	6 "
	White wax		
	Calcined magnesia		4 "

Mix. To make twelve suppositories. One to be introduced after stool each time.—*Druggists Circular*.

EXCESSIVE DOSES OF MORPHIA; EIGHTY-FIVE GRAINS IN ONE DAY.—Dr. L. S. Hinkley, of Avon Springs, New York, reports (*New York Medical Journal*, p. 354) a case of a morphia-consumer, a woman, 26 years of age, who took twenty-five grains of sulphate of

morphia hypodermically at one dose, in his presence, without narcotism. She stated that this was her daily dose, and at times she took two such doses in a day. She declared that she had taken as much as a drachm at night and twenty-five grains in the morning, and had continued this quantity daily for nine days, without any very marked effect.

MISCELLANY.

AN IMPOSTOR.—The superintendent of the Eighteenth and Nineteenth Wards District Association of the Philadelphia Society for Organizing Charity requests us to warn the profession against a professional beggar who represents himself as a medical man in distress, and makes a speciality of victimizing physicians. He is of dark, sallow complexion, about five feet four inches high, has very affable manners, and makes abundant promises to return temporary loans of money. He lives in good style upon the proceeds of swindling, and is an impostor, not deserving of sympathy. His name and address have been sent to this office. His name is not in the *Medical Register*, although he claims to be a regular graduate.

THE Fifty-eighth Annual Commencement of the Jefferson Medical College was held on March 29, at the Academy of Music, when two hundred and fifteen students were graduated. The valedictory address was delivered by Prof. John H. Brinton. The trustees conferred the degree of LL.D. upon Prof. J. M. Da Costa, and also upon Prof. Benjamin Silliman, of Yale College. The degree of D.D. was conferred upon the Rev. J. F. Dripps, of this city.

"ROUGH ON RATS" (a compound containing arsenic) has been administered for criminal purposes in New Jersey, where a whole family was made sick, and in North Carolina, where an infant was killed by it.

THE MEDICAL JURISPRUDENCE SOCIETY will hold its next monthly meeting on Tuesday evening, April 8, at the College of Physicians. Henry Hazelhurst, Esq., will read a paper on "Trial by Jury."

THE Proceedings of the Medical Society of the County of Kings has been discontinued as a separate publication, and will appear hereafter in the *New York Medical Journal*.

DR. J. C. DA COSTA has been appointed Gynæcologist of the Jefferson Medical College Hospital, to succeed Dr. F. H. Getchell, who resigned a short time ago.

PROF. MICHAEL FOSTER, who has been announced as an expected visitor during the coming summer, informs us that he is not coming.

PROF. BAUDUY, of the Missouri Medical College, has recommended bromidia as a reliable hypnotic and as an efficient substitute for chlorodyne.

At the quarterly stated meeting of the Philadelphia County Medical Society, held April 2, a proposed amendment to the Constitution and By-Laws, making women ineligible for membership, did not succeed in obtaining a two-thirds vote. A woman-candidate for membership was rejected at the same meeting.

NOTES AND QUERIES.

LINNÆUS'S "GOLDEN STATUE" FOR DR. PATRICK BROWNE, WHO FIRST INTRODUCED SPIGELIA TO THE MEDICAL PUBLIC.

In looking up some references in the Peabody Library, I was considerably interested in finding in "The Civil and Natural History of Jamaica," London, 1756, by Dr. Patrick Browne, what is probably the first account of the anthelmintic properties of spigelia. This seems probable from a manuscript letter appended to the volume, and written to Dr. Browne by the celebrated naturalist Linnæus. It is dated Upsal, 19 October, 1756, and contains the following: "What you have delivered concerning the spigelia against worms, is very wonderful, since the like never was met with in the medical art, *for which alone you ought to be honored with a golden statue.*"

As it may be of interest to the many practitioners who to-day use this excellent remedy to know something of its history, I append a portion of Dr. Browne's account. "The 'worm grass' grows naturally in most parts of South America, and is now cultivated in many of the gardens of Jamaica. It has been long in use among the negroes and Indians, who were the first acquainted with its virtues, and takes its present denomination from its peculiar efficacy in destroying worms, which I can affirm, from a great number of successful experiments.

"It does this in so extraordinary a manner that no other simple can be of equal efficacy in any other disease as this is in those that proceed from these insects, especially when attended with fever and convulsions. The method of preparing this medicine is as follows,—viz.: You take of the plant, roots and all, either freshly gathered or dry, two moderate handfuls, and boil them over a gentle fire in two quarts of water, until one-half of the liquid is consumed, then strain off the remainder and add a little sugar and lemon-juice to give it a more agreeable taste and keep it from growing viscid or clammy. It may be, however, observed that the decoction is sometimes clarified and sweetened, and is then equally efficacious; which gives a hint to have it made into a syrup.

"The common method of administering this medicine is as follows,—viz.: to a full-grown person you give half a pint at the hour of rest, and a proportionate quantity to all weaker or younger subjects, which is to be repeated once in twenty-four hours for two or three days after. But as the largeness of this dose may render its action too violent, and the use of it both unsafe and precarious, I would recommend the following method as less hazardous and as effectual: Give about four ounces to a grown person for the first dose, and about two or three every six hours after, if its anodyne quality will permit; but to persons of weaker constitution it should be repeated only every ten or twelve hours. This is to be continued for the space of thirty-six or forty-eight hours, when the double dose may be again repeated, and after it takes its full effect it must be worked off with some gentle purgatives, such as the infusion of senna or rhubarb with manna, etc. This medicine procures sleep almost as certainly, and in equal degree with opium; but the eyes seem distended and appear bright and sparkling as they generally do before the eruption of the smallpox and measles, after the sleepy effects are over.

"In a short time after this first dose is administered the pulse grows regular and begins to rise, the fever cools, the convulsions, if any, abate. All the symptoms appear more favorable, and the worms are generally discharged in great quantities by the use of the subsequent purgatives, if not before,—often above a hundred at a time. But when a few only come away, and those alive, which is seldom, the dose must be again repeated, and this scarcely ever fails. I never knew this medicine ineffectual when there was the least probability of success; nay, I have often found it serviceable

when there was not the least reason to expect it. I have been, however, cautious in ordering it for children, for, although I never knew it at all hurtful, its effects upon the eyes are such as frequently to deter me, especially as their fibres are weakly and more sensible of irritation, and the fevers arising from this source in such subjects, seldom so violent as to hinder the administration of some other medicine equally as effectual when the symptoms are not too urgent."

Dr. Browne certainly shows himself to have been a very close observer, and his hints as to the administration of a syrup of spigelia, followed by senna or rhubarb and manna, are carried out to this day,—over a hundred years since his announcement,—with very little improvement.

CHARLES S. DOLLEY, M.D.

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A CORRECTION.

DR. CASPER MORRIS, written by mistake "Wistar" in our last issue, was not, as therein stated, formerly a treasurer of the American Medical Association, although he had attended several of its meetings as a delegate. We are happy to state that Dr. Caspar Wistar, the ex-treasurer of the Association, is still with us, and apparently in the enjoyment of good health and excellent spirits, for the continuance of both of which he possesses our very best wishes.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 16, 1884, TO MARCH 29, 1884.

HAMMOND, JOHN F., COLONEL AND SURGEON.—Now in New York City, on sick-leave of absence, will, after the expiration of his sick-leave, await orders in that city. Paragraph 8, S. O. 70, A. G. O., March 26, 1884.

BACHE, DALLAS, MAJOR AND SURGEON.—Leave of absence still further extended seven days. Paragraph 1, S. O. 50, Headquarters Department of the East, March 14, 1884.

MATTHEWS, WASHINGTON, CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in the Department of the Missouri, and to report in person to the Surgeon-General of the Army, for duty in his office. Paragraph 12, S. O. 62, A. G. O., March 15, 1884.

GIBSON, R. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Hays, Kansas, and ordered to Fort Wingate, New Mexico, for duty. Paragraph 3, S. O. 58, Headquarters Department of Missouri, March 18, 1884.

GANDY, CHARLES M., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Brady, Michigan, as post surgeon. Paragraph 6, S. O. 56, Headquarters Department of the East, March 22, 1884.

EDIE, GUY L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort McIntosh, Texas.

ROBERTSON, REUBEN L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Ringgold, Texas.

Paragraphs 3 and 4, S. O. 33, Headquarters Department of Texas, March 17, 1884.

CROSBY, WILLIAM D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Huachuca, Arizona Territory, and ordered to Fort McDowell, Arizona Territory, for duty. Paragraph 1, S. O. 20, Headquarters Department of Arizona, March 15, 1884.

BLACK, CHARLES S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Concho, Texas. Paragraph 6, S. O. 30, Headquarters Department of Texas, March 10, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS DURING THE WEEK ENDING MARCH 29, 1884.

P. A. Surgeon E. H. GREEN, to the Greely Relief steamer "Thetis."

P. A. Surgeon E. H. MARSTELLER, to the Receiving-ship "Colorado," New York.

P. A. Surgeon I. H. BRYAN, resigned, to take effect April 10, 1885, with leave of absence till that time and permission to leave the United States.

P. A. Surgeon C. W. RUSH, to the Naval Academy.

PHILADELPHIA, APRIL 19, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TWO CASES OF BRIGHT'S DISEASE OF THE KIDNEYS.

Delivered at the Hospital of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of, and Professor of Clinical Medicine in, the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

I.—CHRONIC INTERSTITIAL NEPHRITIS, SIMULATING BEGINNING PHTHISIS.

GENTLEMEN,—The first patient that I shall show you to-day is Mrs. F., 38 years old, a native and resident of this city, and by occupation an operator on a sewing-machine. Her habits have been good, but she has been exposed to strong and frequent draughts of air while at her work. Her father is rheumatic, and her mother died of cancer of the uterus, but otherwise the family history is good. She is married, and has had three children, one of whom died of tubercular meningitis, but the other two are living and healthy. She has always been strong and hearty, although liable to take cold. Seven years ago, she contracted a severe cold, which did not pass away, as previous ones had done, but left her with a little morning cough and a slight muco-purulent expectoration. Since then she has never weighed as much as she did before. At this time there was no shortness of breath, no night-sweats, no fever, and the cough was not troublesome. The appetite and digestion continued good as long as she was careful in the selection of her food. Five years ago, she had a severe renewal of her cold, and then began to have stitches in her side, more cough, and more expectoration, which at times was streaked with blood. This lasted one month; she gradually lost flesh, and although the cold afterwards passed away, and she went back to her former condition, with a little morning cough and expectoration, she never regained her flesh, but slowly became more emaciated. In the early part of last winter, about December, she was particularly sensitive to cold, and took a succession of heavy colds, and then noticed, for the first time, shortness of breath on exer-

tion. The cough began to keep her awake at night, and she ran down more rapidly.

On July 28, 1883, she was admitted to the hospital for uterine disease, and examination proved that there was some trouble with the cervix (epithelioma of the neck of the womb).

Two weeks before admission, she caught a heavy cold, had increased cough, and had, on two occasions, spitting of blood. She also had pains in the side, a great deal of muco-purulent expectoration, some dyspnoea on exertion, and now for the first time did she make mention of any symptom attracting attention to the kidneys: she stated that for one month she had been passing more water than common, and getting up twice in the night to urinate.

There could not be a more impressive illustration than this of the curiously latent way in which kidney-disease often begins and continues until a late period of its development. Would you not naturally suspect, from the history, that this woman, gradually running down in health and subject to colds on the slightest exposure, was preparing for phthisis? Yet all this time the real underlying cause of her poor health, of her morbid sensitiveness to cold, and of her varied, irregular, and intermittent symptoms, had been the development of Bright's disease, which very possibly went back to a nephritis occurring with one of her childbirths. What has happened here happens very frequently, and you will avoid mistakes only by examining the urine, even where attention is not in the least degree called to the kidneys as the seat of disease.

When this patient was admitted, we found evidences of pulmonary disease. There was congestion of the lungs, with râles throughout the chest; the liver and spleen were normal. The urine was intermittingly albuminous; that is to say, sometimes there would be albumen and sometimes there would be none.

The following notes were taken of her condition:

"September 4th. She seemed to be improving.

"5th. Lost eight ounces of blood by hæmoptysis.

"6th. During the night she was seized with a convulsion, followed by coma.

"7th. This morning she had a series of

severe convulsions, at intervals of half an hour, alternating with coma. The urine, which was removed with a catheter, proved to be highly albuminous.

"8th. The albumen was less abundant, she was conscious, and the amount of urine was increasing. Some dry clots were spit up, and the evidences of congestion of the lung were disappearing.

"From the 8th to the 14th she improved.

"15th. She complained of pleuritic pains in the left side. There was no friction-sound. Dyspeptic symptoms had appeared. The urine had now become copious (sixty-four ounces), light-colored, of low specific gravity (1010), the albumen diminished to a trace, and the sediment contained, as it had done before, hyaline and granular tube-casts.

"24th. She is still improving. She has had distinct muscular twitchings, sometimes of the arm and sometimes of the leg, but there has been no convulsion, no headache, and the mind is perfectly bright and clear."

The muscular twitchings continued for several days, but the convulsions did not return. The urine remains as it was, copious, varying from fifty to seventy-five ounces, with a specific gravity changing with the quantity of fluid, and always depositing hyaline and sometimes granular tube-casts.

I shall examine her before you, and speak of the diagnosis and the management of the case.

The history is an interesting one, and it is somewhat unusual in the very great prominence of the pulmonary symptoms. I shall first examine the heart. The left ventricle strikes the chest with great force, and the apex-beat extends around to the anterior border of the left axilla, considerably outside of the line of the nipple. The præcordia shows an increased impulse and extended area of dulness, but no valvular murmur. The first sound of the heart is, however, prolonged and heavy. This is a case of secondary, simple hypertrophy of the heart, dependent, not on valvular disease, but upon changes in the kidneys and arteries. The apex of the left lung in front is full of fine and coarse gurgling râles. The same thing is found posteriorly. There is marked dulness over the lower part of the left lung posteriorly. Over this region there is ægophony or bleating bronchophony, in

which the voice is transmitted with a peculiar quiver. This is not the bronchophony of consolidation, but that of pleural thickening, with imperfect expansion of the lung. On the right side the percussion-note is normal, and there are no râles. On the left side we have chronic congestion and consolidation, or, at any rate, condensation of the lower part of the lung. The right lung is normal. These changes indicate chronic pleuro-pneumonia of the left side, with congestion of a considerable part of the lung. I think that this is not of a tuberculous, but of a chronic inflammatory character. The hemorrhages which have occurred from time to time during the last five years have doubtless been connected with the intense engorgement of the lung; but some of them were probably associated with the disorder of the heart and with the progressive changes in the capillary vessels. It is, of course, possible that these changes in the lung are dependent upon the development of a very slow form of phthisis; but, in view of the fact that it is the lower part of the lung, behind, which is involved, the long continuance of the case, lasting over five years, and the presence of Bright's disease, I think that the condition of the lung is not due to a tuberculous process, but to chronic inflammation with intense congestion. I should therefore not be surprised to find that, under proper treatment, the condition of the lung would materially improve.

As to the kidney-disease, she is evidently developing a chronic contracted kidney. It is either that, or it is the amyloid kidney.

As you are aware, there are three principal forms of chronic organic disease of the kidney: 1, the contracted, granular kidney, dependent upon interstitial inflammation, hardening, and contraction; 2, the large white kidney, dependent upon chronic tubular inflammation; and, 3, the amyloid kidney, in which the renal capillaries and the basement-membrane of the tubules have their proper nitrogenous contents substituted by a peculiar starchy or amyloid material. This latter form is met with in chronic syphilis, chronic phthisis, in old suppurative diseases, in long-standing abscess, bone-disease, and ulceration. In both the chronic contracted kidney and in the amyloid kidney the urine is copious,

as it is in this woman, varying from sixty to eighty or more ounces per day. In the contracted kidney the specific gravity is usually low. In amyloid disease it is higher,—almost normal. In contracted kidney the amount of albumen is small, while in amyloid disease it is large. In contracted kidney the tube-casts are small hyaline; in amyloid disease there are numerous large hyaline casts. In contracted kidney dropsy appears late, and is not very marked until the closing stages; in amyloid disease it is early, extensive, and extreme. In contracted kidney the associated lesions are hypertrophy of the heart, hemorrhages into the retina, intercurrent attacks of pleurisy and pulmonary congestion, convulsions, and coma. In amyloid disease the associated changes are hypertrophy of the liver and spleen, with evidences of long-standing suppurative disease, with less tendency to affections of the heart, and less tendency to uræmic attacks.

From this statement you will see that, if it were not for the single fact of the existence of this chronic lung-trouble, this would unhesitatingly be classed as one of chronic contracted kidney. Let us now see if we find any evidences of amyloid disease of the liver or spleen. Are these organs enlarged? The liver is certainly not enlarged. It is as small as is consistent with health. The upper border of the spleen cannot be determined, on account of its dulness merging with that of the lower part of the left lung, but its lower edge does not go below the margin of the free ribs. I therefore conclude that there is no enlargement of the spleen. There is no evidence of amyloid disease of the liver and spleen.

That being the case, and in view of the fact that the urine is copious, of low specific gravity, with small hyaline and granular tube-casts, and with only a trace of albumen, without a particle of oedema anywhere, and with this serious uræmic outbreak which I have just described, I conclude that, in spite of this long-standing lung-trouble, the renal condition is that of developing, contracted, granular kidney. It is a case of chronic interstitial nephritis. There may be some amyloid change, but I cannot think that there is a strongly-marked amyloid process.

I need not say that the prognosis is very grave. There are and have been marked

dyspeptic symptoms. There is a serious pulmonary lesion, which is itself sufficient to cause great anxiety, and, in addition, there is reason to suspect that there has been long-standing renal disease. The woman has lost much flesh, her nutrition is seriously impaired, and we have lately seen how she hovers on the brink of terrible symptoms which may develop at any moment from a sudden congestion of the kidney. The prognosis is therefore not only grave, but it is anxious, for she is in danger of serious and urgent complications.

In speaking of the treatment of this patient I shall first refer to the treatment of the paroxysm. I do not wish to-day to spend time in discussing the nature of uræmia. Suffice it to say that the term is applied to that state of blood-poisoning and general intoxication which is connected with serious impairment of the functions of the kidneys. It may come on acutely from sudden congestion of healthy kidneys, or it may develop gradually from organic disease of the kidneys. In this patient the uræmia was very likely due to a sudden, severe, intercurrent congestion, grafted upon kidneys previously diseased. The attack presented the ordinary well-marked phenomena of this condition; that is, severe general convulsions, and, in the intervals, coma. The prognosis of a uræmic attack is based far more on what we suspect the previous disease of the kidney to be, than it is upon the severity of the attack. In the puerperal condition we have very serious uræmic symptoms, with violent convulsions and intense coma, and yet, in such cases, prompt treatment usually produces a cure. In acute nephritis there may also be most marked uræmic symptoms, yet the chances for recovery are good. It is when the uræmia comes on as the result of the gradual development of chronic Bright's disease that the prognosis is hopeless. You will therefore conclude that the fact that this woman reacted from the marked uræmic condition is a most favorable feature in the prognosis, and indicates that although her kidneys have long been diseased, yet the disease cannot be very far advanced, since the relief of the acute congestion which caused the terrible symptoms has allowed her to return so promptly to a state of freedom from nervous symptoms, with comparatively good renal action. I do not know

but that I have a more favorable opinion of her case since she has had this uræmic attack and recovered from it than I would have held if she had not had the uræmic symptoms. The treatment which was adopted was very simple. It consisted of one hundred grains of bromide of potassium with fifteen grains of chloral hydrate. After this had been administered, she had no more convulsions. She was next placed in a warm bath, and then removed and wrapped in a blanket. This caused profuse sweating, the coma rapidly passed away, and she soon became conscious. Since then there have been no severe nervous phenomena, only a few muscular twitches.

I next speak of the treatment of the chronic condition. This may be considered under three heads: 1, the relief of congestion; 2, the promotion of elimination; and, 3, the control of convulsive seizures.

The Relief of Congestion.—According as we believe the congestion to be intense, and the amount of organic disease small, are the promptitude and the severity of the treatment to which we resort. Suppose a woman is anasarcaous in the ninth month of pregnancy; her urine grows more and more scanty, and is found to contain albumen. Suddenly she wakes up, complains that things look black, and immediately has a violent convulsion. Here there is reason to believe that the organic disturbance is at its minimum, and the congestion at its maximum. We therefore, without hesitation, bleed such a patient. I should under these circumstances bleed freely. I have never seen a patient where bleeding was not used do as well as where it has been copiously employed. I repeat the bleeding with the recurrence of the convulsions until a large amount of blood has been abstracted. When the oedema has been so great that I could not find a vein, I have opened an artery with most satisfactory results. In the same way, in the uræmic convulsions occurring in children after mild scarlet fever, or in adults with the development of acute Bright's disease, I would not hesitate to resort to actual depletion, although, as a rule, in these cases leeches or wet cupping over the kidneys is sufficient.

The Promotion of Elimination.—For this purpose sweating is better than purging. Sweating by the warm bath or warm

pack is just as useful as that produced by jaborandi, and does not incur even the slight risk of cardiac depression which attends the use of jaborandi. On the other hand, it is more troublesome and slower in its action. If the symptoms are urgent, or the patient is heavy and cumbersome, or the bath is not ready, jaborandi may be administered by the rectum, or pilocarpin may be used under the skin. After sweating has been induced by the warm bath, it is well to keep up the action of the skin by the use of jaborandi. If the bowels have been constipated, the tongue coated, the abdomen distended, and the bowels evidently more or less loaded, it is well to give a purge of calomel, placing the powder dry on the tongue. If elimination is not secured by sweating, one drop of croton oil with fifteen drops of sweet oil may be placed on the tongue.

The Control of the Convulsions.—Although means are being employed to prevent the recurrence of the paroxysms, yet it is important to check the convulsion as soon as possible, for a hemorrhage in the brain may take place and the patient may pass from the uræmic coma into apoplectic coma, ending in death. If the convulsions are severe, the patient should be put under the influence of chloroform or ether, and the anæsthetic should be kept up until free elimination is produced or depletion has been practised. In puerperal convulsions where the seizures are so furious and the vascular tension so strong that there is special risk of the rupture of a blood-vessel and of hemorrhage into the brain, I should always resort to ether or chloroform. In the ordinary uræmic convulsions of Bright's disease, large doses of bromide and chloral, with the inhalation of nitrite of amyl when the convulsion is at its height, will usually suffice. In the present instance, bromide and chloral were in themselves sufficient to control the seizure.

We have now to treat a patient with chronic Bright's disease and chronic lung-trouble. With this pulmonary trouble and emaciation, I should be unwilling to treat her with such a rigid diet as I should resort to if she were in a better state of nutrition and were not the subject of chronic lung-disease. She will receive a light breakfast and supper, consisting of some form of mush, with cream or milk. Her dinner will consist of meat, fish, or oysters. Between each meal she will be given a

glass of milk; eggs will be avoided. The form of albumen found in eggs has seemed to me to dispose to an increased excretion of albumen. I prefer to this lean underdone meats and oysters.

I propose to give her cod-liver oil and bichloride of mercury. Iodide of potassium, which I should gladly give her, occasionally irritates the kidneys. I therefore prefer to use bichloride of mercury, beginning with a moderate dose and increasing it as the stomach will permit. I shall commence with one-fiftieth of a grain, slowly increasing to one-twentieth of a grain, immediately after meals. The cod-liver oil will be given during the alkaline stage of digestion, an hour and a half after meals. Iodine will be applied over the left chest as frequently as can be done without producing too much irritation of the skin. The action of the skin will be promoted by daily friction and the rubbing of a little oil into the skin.

I shall give you an opportunity of observing the effect of this treatment.

II.—SUBACUTE CATARRHAL NEPHRITIS.

As a companion picture to the patient who has just gone out, I bring before you this young woman, from whom we have obtained the following history. M. M., a resident of this city, a dress-maker, much exposed to the weather, but of good personal habits; married, and mother of two children, one of whom died of marasmus. One year ago she had a miscarriage. She has had the ordinary diseases of childhood, but was apparently in ordinary good health up to the time of the miscarriage. Since then she has never been well. Following the miscarriage she had a number of catarrhal attacks. She first had severe leucorrhœa, which lasted profusely for several months. Then she had gastro-intestinal disturbances, as manifested by loss of appetite, coated tongue, dyspepsia, and occasional diarrhœa. She next had inflammation of the mucous lining of the gall-ducts, with swelling and obstruction to the flow of the bile, causing catarrhal jaundice. This soon passed away, but her dyspeptic symptoms, with alternating constipation and diarrhœa, remained.

Three months ago the evidences, of acute catarrhal nephritis showed themselves, and were quickly followed by œdema of the feet. The swelling extended, and within two weeks the entire body was involved,

the swelling of the eyelids being so great that she could not open them. The dropsy has since subsided, and now is only found in the feet at evening and after walking, and in the eyelids in the morning, as is commonly the case in the moderate dropsies of Bright's disease. About the time that the œdema appeared, she had to urinate three or four times during the night, and had to relieve herself frequently during the day. The amount of urine passed each time was very small. It was high-colored, and sometimes looked as though it contained blood. She also had pain over the renal regions; but this was probably due to uterine disease following the miscarriage.

She was admitted about five weeks ago. At that time she had dropsy, and the urine contained a considerable quantity of albumen, granular and epithelial tubercasts, and occasionally a little blood. The quantity of urine has now come up to the normal, and indeed has gone beyond. It ranges between fifty-two and fifty-seven ounces in the twenty-four hours, and has been as high as seventy ounces.

Here is a case where the associated conditions of catarrh of a great many mucous membranous surfaces, of the vagina and uterus, of the gastro-intestinal canal, of the hepatic ducts, and of the renal tubules, the scanty and high-colored urine, frequent micturition, the large amount of albumen, the early, extensive, and persistent dropsy, indicate that there was acute catarrhal nephritis. Unfortunately, the acute attack was not treated vigorously, and it has now passed on to a subacute form, tending to the production of the large white kidney. The diagnostic points between this case and the one which you saw a few minutes ago are so distinct that I need not refer to them particularly.

This patient's general health is so good, and the disease so recent, that I think we may hope to bring about a complete cure. She must, however, be treated with extreme vigor throughout this winter. The thing which is above all others essential is that no recurrence of the congestion or catarrhal irritation of the kidneys shall be allowed to take place. No exposure to draughts, no getting the feet wet, no changes in the clothing, and no sudden cooling off while perspiring, can be permitted. She is now where she ought to be, in a well-regulated hospital, and, if she

possibly can, she ought to remain here during the coming winter. Her food will consist of farinaceous articles and milk, with meat twice a week. Moderate exercise, light gymnastics, and friction of the surface should be persisted in to maintain a healthy action of the skin. With this hygienic treatment, I should with confidence resort to the diuretic preparations of iron, expecting that under their use she would make a thorough recovery. This is the type of cases in which iron with diuretic alkalies, such as solution of the acetate of ammonia and bitartrate of potassium, produces excellent results. She has from time to time taken considerable quantities of Basham's mixture. She has also taken a solution of bitartrate of potassium. At times, when the stomach was especially out of order, she has used bismuth and pepsin, and on one occasion, when the gastro-intestinal disturbance was very marked, minute doses of nitrate of silver and opium. If the patient remains with us, I shall show you the result of the treatment.

ORIGINAL COMMUNICATIONS.

CAN A MAN AFFECTED WITH SYPHILIS COMMUNICATE THE DISEASE TO A HEALTHY FŒTUS WITHOUT INFECTING ITS MOTHER?—CAN A MAN BEGET A SYPHILITIC CHILD WITHOUT INFECTING ITS MOTHER?

BY WILLIAM R. D. BLACKWOOD, M.D.,
Neurologist and Electrician to the Presbyterian Hospital,
Physician to St. Mary's Hospital.

A WIDE difference of opinion exists as to whether the fœtus in a pregnant woman, at any period during her term, can be infected with syphilis through sexual intercourse with a man having the disorder in some form, without either at the time of connection, or subsequently previously to her delivery, contaminating the mother, she being free from the malady before conceiving. Hunter believes that such may be the case;* so does Blegny;† and Nisbett and Laurence also hold the same opinion. Vidal‡ reports the case of a woman who had never, under careful

examination, shown any signs of syphilis, but who gave birth to a child which died in six or eight weeks from congenital syphilis. The mother for many years after the birth of the child exhibited no symptoms of the disease. Plenty of authors might be quoted who maintain that syphilitic children may be born of women who are at the time of confinement, and subsequently, perfectly healthy, but they are mostly in "the long ago," and during the past twelve years the contrary opinion has prevailed among syphilographers. The later writings of Cullerier, Diday, and other Continental authors lean strongly towards the absolute belief that a syphilitic child must be born through an infected mother, and Sturges,§ an able and experienced authority, remarks that "whether future cases will be seen where the mother can be positively proved never to have had syphilis, and yet can procreate syphilitic children, is a point which no person can state with certainty. At any rate, all we can say now is that, with our present knowledge on the subject, the weight of evidence is against the theory that a healthy woman—by that I mean one who is free from syphilis—can beget syphilitic children."

Cases occurring in my practice during the last twelve years lead me to hold the belief that an affirmative answer may be given to the title of this paper, and in support of this opinion the following history is narrated:

Mr. A., a young married gentleman, the father of a healthy female child then three years of age, consulted me for a slight sore on the glans penis in May, 1878. As the ulcer bore unmistakable evidence of being specific, I charged him with loose conduct, and, upon my urging him to frankness in order that my treatment should rest on a satisfactory basis, he confessed having had intercourse with a kept-woman, in another city, which he had visited in his capacity of a travelling salesman, twenty-two days before seeing me. He declared his innocence of anterior illicit sexual intercourse, this being his first and only offence. Having been his professional attendant and also that of his wife for several years before their marriage, I knew both families well enough to believe him, and I was morally certain of the chastity of his wife. He was put under a mercurial course at once, although I do not believe that constitutional symptoms are either de-

* *Traité de la Mal. Vénér.*, 1852.

† 1698, p. 101, quoted by Diday.

‡ *Gazette des Hôpitaux*, 1841.

§ Diday and Sturges, *Hereditary Syphilis*, p. 23. William Wood & Co., 1883.

laid or modified by any form of treatment between the appearance of the primary lesion (chancre) and the earliest secondary manifestation. My object in thus acting in his particular case was to make a mental impression on him in furtherance of my purpose to prohibit sexual relations between himself and his wife; and such had not taken place since his return from the trip. I explained to him the inevitable result of intercourse during the primary stage, and agreed to avert any domestic trouble consequent upon action. Before leaving my office he informed me that in all probability his wife was then pregnant, as she had missed her catamenia, which should have set in just before he left the city on his unfortunate trip. She had always been "regular" to a day heretofore, and there was additionally morning nausea and other evidences which satisfied me from previous experience that his belief as to her condition was correct.

In a few days I saw Mrs. A., who was suffering from neuralgia, and, as she had lately been troubled with slight sciatica, I embraced the opportunity to prohibit sexual relations as being harmful at present, thus guarding both parties and averting suspicion. In six weeks secondary skin-symptoms were apparent in the father, and soon sore throat and mucous patches were defined. Cervical and inguinal adenitis were present also. His mercurial was increased to the verge of toleration, and in a couple of months his improvement was marked,—so much so as to make it a matter of difficulty to restrain him in his marital duties. Unfortunately, as the sequel shows, he at this time, when on another business trip, had a conversation with a medical acquaintance, who positively asserted that a man not having a chancre or other local lesion of the penis could not infect a woman, much less a fetus, by sexual intercourse, as the semen, he argued, was shut out from the womb in case of pregnancy, and could be washed out of the vagina should the female not be pregnant. The result of this confab was that upon his return home before seeing me (which I urged him always to do, that I might keep him well under control) he had intercourse with his wife twice, and no abluion or other precaution was observed at either time. He owned up to this when he saw me, but strenuously insisted that no opportunity of contamination through kissing had taken place either then or at any time since his misfortune. In less than a year he was apparently free from constitutional defect, and no suspicion as to what had existed was known to his family or to his numerous friends. The baby, a boy, had been born in due time, but was evidently ill nourished and weakly. It had the wizened, old-man look of a syphilitic, although no perceptible lesion was just then apparent. The placenta was small, and, though not at

all offensive, was easily torn, discolored, and so far from normal in appearance as to attract the nurse's attention.

The infant had "snuffles" within twelve hours, and in two weeks showed roseola, copper-colored spots, and ulceration of the soft palate and pharynx. It was placed under treatment, and gradually recovered. The boy is still alive, and, though free from perceptible taint, is weakly and totally unlike his elder sister. The "Hutchinson teeth" are not present. This much for syphilitic infection of an undoubtedly previously healthy embryo in utero.

In December, 1881, Mrs. A. was again delivered of a female child at full term, after a normal pregnancy. The after-history of this baby was that of its immediate predecessor. Within three weeks the child had coppery roseola, mucous patches, anal condylomata, and sore throat, with subacute iritis, all of which, however, gave way without much difficulty to mercurial treatment. I used in each case the bichloride in compound syrup of stillingia, the same preparation having previously *apparently cured the father*. The condylomata were washed with dilute Labarraque's solution and then dusted with calomel,—the best plan known to me. For a few times only a mild (twenty-five per cent.) mercurial ointment was rubbed into the cervical enlarged glands, but the plan, being dirty, was stopped.

To-day both the younger children are apparently well, though easily affected with coryza on exposure, whilst the elder sister is a young lady of excellent physique, notwithstanding having passed through severe scarlatina, rubeola, parotitis, pertussis, croup, and all other infantile and youthful complaints. Aside from spasmodic croup, the two syphilitic children have not contracted *any* of the above-noted diseases, although exposed to them all.

Was the father free from syphilis *before his marriage*? I have not the slightest hesitation in saying YES! I have been the family physician in his father's home for more than twenty years, and I have carried the boy and his brothers and sisters through all their ordinary illnesses. The grandparents are yet living, and are enjoying their extreme old age in perfect health. His father and mother are also perfectly healthy, and until he contracted the chancre *after his marriage*, and *after the birth* of a sound, strong girl, he was robust and free from taint of any kind. There is no scrofula, phthisis, or other defect in the family throughout the three generations now alive, and the family history in the past is good.

Was the mother of these children also free from syphilis before their birth? For precisely similar reasons I answer YES! I attended her mother at the birth of Mrs. A., and have known her intimately ever since. Her father was a strong and healthy man, and he died of pneumonia a few years ago. Her mother is still alive, and the family history on both sides is that of good, hearty, English blood of an old, reputable, and long-lived race. The lady herself, aside from occasional neuralgia, has been exceptionally favored with good health. The supposition of adultery is out of the question. I know her too well. She is a consistent Christian wife and mother, devoted to her family, beyond reproach or suspicion, and my only reason for alluding to this point is to exclude it as being in other reported cases of infection of the fœtus the probable or actual explanation.

With the history as given above it cannot be reasonably doubted that the fœtus—originally healthy—was infected with syphilis by its father at about the thirteenth week of intra-uterine life. The whole series of events was clearly traced,—it is rarely that a more complete history passes under the knowledge of the physician,—and hence I see no avenue of escape from the belief that a healthy woman (free from syphilis) may conceive and subsequently bear a syphilitic child which became syphilized in utero, and the mother may, notwithstanding this, remain after delivery free from constitutional taint. *Not the slightest sign of syphilis ever has appeared in Mrs. A., and I have watched her closely.*

As to the second section of our title, "Can a Man beget a Syphilitic Child without infecting its Mother?"

The birth of a syphilitic child in both instances, as above narrated, seems to answer the query affirmatively; but I desire to present the history briefly of two other families which have been under my care for several years.

Mr. C. consulted me for an attack of muscular rheumatism in 1872, which had confined him to the house for a week or ten days before I saw him, under the care of another physician, and, as he was not benefited by the treatment adopted, I discontinued it; but my own efforts were futile, though varied, until he was put under full doses of potassium iodide. He subsequently had other attacks, which always gave way to the iodide salt. One day he called my attention to the peculiar condition of his nails; which were cop-

per-colored and continually dropping off, to be succeeded by new and apparently healthy ones, which soon, however, went the way of their predecessors. I had by this time become suspicious of his condition, and, although he had a son some ten years of age who was in good health and free from syphilitic taint, I was satisfied that lues venerea was at the bottom of the difficulty. Careful investigation disclosed the fact that subsequently to the birth of the boy the father contracted first a chancre, then, some week or so afterwards, chancroid. Suppurating bubo ensued (doubtless from the chancroid), and in due time roseola of the face and chest, palmar and plantar psoriasis, with acneiform syphilide of the scalp, were presented. He lost nearly all his hair, had perforation of the palate, and finally nodes of the long bones and cranium. He went through a regular syphilitic siege, but emerged in pretty good condition nevertheless. At the time I took charge of him nothing would have attracted professional attention save a useless eye, which he stated was destroyed by a spark burning into the posterior chamber. I got his history partly from the dispensary to which he went under a feigned name, and also from a physician who had seen him as a private patient. Why he concealed the truth from me after getting well acquainted I do not know, for when I suggested the possibility of constitutional taint and the necessity of frankness, in his own interest, he admitted the justice of my inquiry, and would have been perfectly willing, he said, to own the truth had there been any ground for so doing. To the day of his death he denied all contagion, although I knew the truth for several years before that event.

About two years after taking charge of his family I delivered his wife of a dead child; and, without exception, that attendance was the most disagreeable in all my experience, nothing approaching it except a second edition two years later on in the same woman. The child was absolutely rotten. The placenta was a putrid mass which was almost pultaceous. How it performed its function to the last I cannot understand. The amniotic fluid was pea-green, slimy, abundant, and horribly offensive. I have a strong stomach,—I have never flinched from post-mortem examinations in subjects undergoing decomposition, or from duty which more than once required my close supervision in the burial of men and horses alike which had lain long on the battle-field in the sun of Virginia and Tennessee,—but the stench and sight of that infant's body and its concomitants almost turned me inside out. I vomited like a cholera patient, and I smelt worse than a skunk until a bath with hot water, carbolic soap, and a liberal raid on my wife's selection of Lundborg's essences rendered me presentable. For a week, despite antiseptic and

other measures, the person of the woman was extremely offensive to approach; and the nurse surely earned her money in that lying-in. The patient had, however, no subsequent trouble, and in ten days was downstairs.

She was confined again under my charge a little more than two years after this, and the result of her labor was substantially that above described, the child being livid, copper-colored, and green in splotches, not quite so flabby, and very large, weighing about, as estimated, twelve to thirteen pounds. Forceps were used by me to expedite the labor, as the shoulders were very broad, and I had to call a friend in to help me in the delivery after the head was born. The doctor who kindly assisted me has had a large obstetrical experience, and he agreed with me as to the syphilitic condition of the child, and the patient was also critically examined by him, at my request, to determine the question whether or not *she* had any evidence of constitutional syphilis. Another gentleman of very large experience took great interest in the case, and he also carefully examined the woman subsequently, with the same object in view. A third physician, well posted in venereal diseases, has added his opinion; and the united testimony of all is that *the woman is free beyond doubt from syphilis in any form, and has never had it.*

She has never since I became her family physician been treated for syphilis. She has taken nothing in the shape of medicine which could modify or eradicate syphilis: in fact, beyond a little simple expectorant, such as syr. prunus. virg., or a little citrate of magnesia, she has had no medication whatever. Her husband has now been dead a year (he succumbed to uræmic poisoning), and she is perfectly free from perceptible dyscrasia of any kind.

[Since writing this paper I have carefully examined her, and she is in every respect a strong and perfectly healthy woman.]

We have thus the history of a woman bearing first a healthy boy, then, through acquired syphilis on the part of her husband, she gives birth to two syphilitic children still-born, and yet she remains free from any discoverable constitutional defect.

I now present a third case, under a different condition, but nevertheless illustrating the same point.

Mrs. R., a stout, strong, and healthy woman, with a good, clear, family history, became pregnant two years after her marriage, and engaged me to attend her confinement. I have habitually looked after my pregnant patients for the last four or five months of their term, in order that any impending

trouble might be averted, if possible, and, although not pertinent to the question under consideration, I may say that through this care I have been able to protect several patients from a repetition of convulsions, serious dropsy, and like complications which had, under another physician in former labors, nearly carried them off. About the sixth month of gestation, threatening of abortion set in, which was controlled by rest and viburnum prunifolium for a month, but at last she miscarried, and the foetus was plainly syphilitic. Subsequently to this I saw her through three other premature confinements, the last event calling me out on a hot summer night, through a drenching storm, three miles from home, in the East Park. The product of each conception was undoubtedly syphilitic, and, as the husband had come under my charge for urethritis once or twice during these years, I interviewed him as to the past, and cautioned him against further experimentation in the culture of "*avena sativa*" of the wild variety. He had contracted syphilis early in life, but was until after his marriage in presumably good health, beyond wandering neuralgic pains, which at first were attributed to exposure in his business, which was out of doors and at night. Grave lesions of the nervous system, however, gradually developed, and he is at present well advanced in progressive locomotor ataxia.

Despite the fact that the husband is thoroughly syphilized, *the wife is in apparently perfect health!* Here we have four instances of the foetus being retained for from six to seven and a half months, and, although in each instance it was clearly syphilitic, the mother *did not* suffer through the utero-placental circulation. Besides these definite miscarriages, she "missed her courses" several times prior to her first admitted pregnancy, and was "too unwell" next month,—abortions beyond question.

The difference of opinion as to the etiology and semeiology of syphilis will probably never be reconciled by competent observers, for here, as elsewhere, "doctors will disagree." I have never believed, as taught by a surgeon of world-wide fame, that scrofula is only a variety of syphilis; I do not believe that syphilis is at the bottom of so many obscure diseases, particularly those neuroses which are intractable; nor do I believe that syphilis once acquired is never eradicated. It would be a bad outlook were all posterity to suffer for the sins of the parents to all eternity through hereditary maladies which sap the constitution as does the "French disease:" in

fact, if syphilis is so common as some would have us believe, and as difficult of annihilation as others teach, the nation would before long die out. Plenty of patients whom I treated for constitutional syphilis fifteen and more years ago are now perfectly well, with healthy and well-developed families.

My reading and observation for several years past have led me to believe, as stated in the outset of this paper, that the majority of syphilographers contend that in all cases children born syphilitic are the progeny of syphilitic mothers, the father not necessarily being diseased.

The three cases herein noted show, to my mind at least, that, first, a fœtus carried by a non-syphilitic mother and begotten by a non-syphilitic father *can be syphilized* before birth, and the mother *escape constitutional taint*; and, second, that a healthy woman may conceive through a syphilitic husband, give birth to a *syphilitic child*, and, notwithstanding, *escape constitutional taint*.

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REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

THE past three months, though not producing any work of the first importance in the department of dermatology, has yet been productive of a considerable number of papers and volumes of interest to the general profession.

A NEW TEXT-BOOK.

Among books, the most important, perhaps, is the text-book of Hebra the younger, which, though narrow in some respects, and showing the isolated and stationary character of the Vienna school of to-day, yet contains much that is original and progressive. Hans Hebra adopts the new classification of Auspitz, which I am inclined to think an improvement on the classification of the elder Hebra, even as modified by the American Dermatological Association. It is, in fact, to a certain extent, an extension of this in accordance with the enlarged knowledge of skin diseases which obtains at the present day.

Hebra adopts nine general groups of skin diseases, seven of which rest upon an

etiological and two upon a pathological and anatomical basis. They are as follows: Class I. *Simple inflammatory dermatoses*, including erythema, eczema, the *animal* parasitic diseases, miliaria, acne, sycosis, furuncle, carbuncle, erysipelas, etc. Class II. *Angio-neurotic dermatoses*, including the acute exanthemata, medicinal eruptions, urticaria, erythema, pemphigus, acne, rosacea, gangrene, etc. Class III. *Neuritic dermatoses* (tropho-neuroses of the skin), including herpes in its various forms, with the ordinary tropho-neuroses. Class IV. *Dermatoses with partial congestion*, including cyanosis, œdema and myx-œdema, elephantiasis and scleroderma, idiopathic and senile gangrene, ainhum, etc. Class V. *Hemorrhagic dermatoses*, including purpura. Class VI. *Idioneuroses*, including hyperæsthesia, anæsthesia, neuralgia, pruritus, prurigo (!), and cutis anserina. Class VII. *Anomalies of development of the epidermis and its appendages*, including ichthyosis, lichen pilaris, cutaneous horn, corns and callus, psoriasis, lichen ruber, pityriasis, hypertrichosis, alopecia, onychia, seborrhœa, milium, hyperidrosis, chromidrosis, anidrosis, etc., nævus pigmentosus, chloasma, leucoderma, canities, verruca, epithelioma (!), and carcinoma (!). Class VIII. *Anomalies of development of the corium*, including lupus, scrofuloderma, lepra, fibroma, molluscum, keloid, neuroma, sarcoma, etc., together with atrophic lines and spots, and scleroderma. Class IX. *Vegetable parasitic affections*.

It would consume too much space were I to give an outline of the contents of the work, but I may say that the descriptions of disease are generally very clear and the illustrations quite numerous. Comparatively little credit is given to American writers on skin diseases, which is to the detriment of the work, and especially its therapeutic part. This is indeed ridiculously inadequate.

DIAGNOSTIC AND PROGNOSTIC VALUE OF THE INITIAL RASHES OF SMALLPOX.

Dr. McNeill, of Colonsay (*Edinburgh Med. Jour.*, September, 1883, and succeeding), says that these rashes are rarely met with in unvaccinated subjects. They usually appear before the physician is called in, and cause so little inconvenience that the patient is sometimes unaware of their presence. They have frequently been mis-

taken for the coexistence of measles or scarlatina together with the smallpox.

McNeill divides the initial rashes of smallpox into the erythematous, the petechial, and the petechio-erythematous. The petechial rash usually precedes the ordinary smallpox eruption by a period varying from some hours to three days. In some cases it may be the first symptom of the premonitory stage. The petechiæ reach their fullest development in about three days, after which they slowly disappear. The site chosen by this rash is characteristic,—being almost invariably the lower part of the abdomen and the groins to an inch or two below Poupart's ligament. More rarely it extends up over the trunk to the nipples and axillæ.

The erythematous rash presents the usual features of erythema, but the redness is sometimes uniform, like that of erysipelas, at other times mottled, like that of scarlet fever, and in other cases in patches and crescents, like measles. The erythematous rash appears from one to four days before the outbreak of the regular smallpox eruption. It usually lasts from one to four days, fading gradually through lighter shades of the same color, and leaving no pigmentation. The extensor surfaces of the thighs and legs are most commonly affected, though the whole body may be involved.

The petechio-erythematous rash is more widely diffused than the petechial form. Sometimes, in addition to the rash upon the body, the forearms and the legs below the knees are covered with a bright-red erythematous rash, which disappears on pressure.

No reason can be alleged for the occurrence of the initial rash in any given case, the only uniform condition noted being its occurrence in vaccinated persons.

As regards the diagnostic value of the initial rashes of smallpox, their peculiarities are given by Dr. McNeill as follows:

1. Persons under 10 are rarely affected. This will exclude a large number of cases of scarlet fever, measles, etc.
2. The initial rashes are commoner among vaccinated than among unvaccinated persons.
3. The locality and appearance of the initial rashes as above described should aid in distinguishing them from the petechial rash of smallpox and the rashes of scarlet fever and measles. The purely erythematous rashes of smallpox, however, closely

resemble those of the other affections named. 4. The accompanying symptoms, the fact of previous attacks of the suspected disease, or the simultaneous existence of a prevailing epidemic of a given disease, must all be taken into account.

McNeill's conclusions as to the prognostic value of the initial rashes of smallpox are as follows:

1. A purely erythematous rash presages a lighter attack of smallpox than any other or than no initial rash.
2. A petechial rash indicates twice the chance of a confluent or semi-confluent eruption of smallpox to follow, but the ultimate result will be about as favorable as in general cases.
3. A petechio-erythematous rash indicates that the case is thrice as likely to be severe as an average case, and the termination is more likely to be unfavorable. Dr. McNeill also thinks that the darker the redness and the more persistent on pressure, the more likely it is to be severe; but if a pure petechial rash is on one part of the body, as the abdomen, and a pure erythematous rash on another, as the arms, the prognosis is more favorable.

HERPES AND HERPES ZOSTER.

A number of papers on herpes and herpes zoster have recently appeared. Dr. Paul Fabre has published a volume of two hundred and fifty pages on herpes zoster, in which a very complete abstract of the present state of our knowledge on this subject is given. He gives notes of forty-one cases coming under his personal observation. Fabre defines herpes zoster as "an eruption arranged in patches of various number, shape, and size, separated by intervals of healthy skin, and seated along the course of a nerve." He prefers not to define the eruption, because, as he says, it varies so greatly in different cases and at different periods. He considers the erythematous patch as the essential lesion because it is always present, though vesicles may or may not appear in the course of the disease. Fabre divides the double zoster into—1, those which are complete and symmetrical, forming a girdle; 2, those which are multiple but not symmetrical; and, 3, bifid zoster, when several branches or nerves are simultaneously affected, as when the eruption is found over the scapular region, on the chest, and down the arms. In reality, however, these all

proceed from one root. The chief interest of the work lies in the notes of cases reported and referred to, as, for instance, those which go to prove a lingual and guttural herpes zoster. Herpes buccalis, labialis, progenitalis, are not included under the head of herpes zoster by Dr. Fabre.

Fabre has studied the etiology of zoster very carefully. He shows that it occurs in both sexes and at all periods of life alike. The causes actually known to produce herpes zoster are cold, neuralgia, moral impressions, traumatism, and tumors which may irritate or compress a nerve. As to symptomatology, he goes extensively into this branch of the subject, and gives many interesting cases coming under his own personal observation. In one of Fabre's cases a patient affected with abdominal herpes zoster suffered painful cramps and true clonic convulsions in the sacro-lumbar muscles and in the right anterior portion of the abdomen, while another suffered paralysis of the deltoid, which was ameliorated on the outbreak of the eruption. In adults pain causing insomnia is not infrequent, while in children pain is unusual.

Fabre describes three varieties of zoster: 1, the acute febrile form (which has sometimes caused authors to describe zoster as an exanthematic fever); 2, a sub-acute or apyretic form,—the common variety; 3, a chronic variety, excessively rare, and, in fact, probably a form of recurrent zoster, of which, as is known, only half a dozen examples have been described. Want of space prevents a further résumé of this interesting work, a tolerably full analysis of which will be found in the *Annales de Dermatologie et de Syphiligraphie*, t. iv., 1883, p. 603.

Leloir (*Union Méd.*, 1884, p. 1014) describes a form of herpes which he calls "black herpes." His case was that of a pregnant woman who displayed a bluish patch of disease over the left crista ili, about two or three inches in diameter, accompanied by fever, and which developed into gangrene. The fever lasted through confinement, which took place a few days later and was followed by a copious eruption of blackish herpetic vesicles upon the lips. The fever continued several days,—the patch on the hip meanwhile sloughing,—at the end of which time the patient died in sudden collapse.

Leloir considered the herpes in this case as an eruptive fever, and thinks that when the herpetic eruption appears on the lips in pneumonia a similar process is going on in the lung.

A curious case of gangrene in connection with herpes is here called to mind, where herpes phlyctenoides of the face was accompanied by gangrene of the mucous membrane of the mouth and pharynx. (Hallopeau and Tuffier, *Union Méd.*, 1880, p. 956.)

A similar case, except that the buccal lesions did not go on to gangrene, has recently been reported by the writer (*Poly-clinic*, April, 1884). Here a violent attack of herpes of the face was accompanied by herpes of the buccal mucous membrane and of the tongue. The fact is that herpes, in spite of the amount of attention it has received, has not yet been studied sufficiently, and there are many mysterious cases of the affection, the causation of which remains to be explained.

ICHTHYOL IN SKIN DISEASES.

Ichthyol is a peculiar preparation of a tar-like character, prepared by treating with concentrated sulphuric acid the product of a dry distillation of a bituminous rock containing fossil fishes and found in certain districts of the Tyrol, and which has been introduced into the pharmacopœia of skin remedies by Unna, of Hamburg (*Mon. Heft f. Prakt. Dermat.*).

As found in the market, it is a sort of ointment, of the consistence of vaseline, forming an emulsion with water, mixing readily with vaseline and oils, and partly soluble in ether and partly in alcohol, while entirely soluble in a mixture of the two. Ichthyol contains about ten per cent. of sulphur, together with oxygen, carbon, hydrogen, and a minute quantity of phosphorus. The peculiarity of ichthyol, as compared with other compounds containing sulphur, is that the latter cannot be separated without destructive decomposition of the ichthyol.

Unna has found this remedy a useful application in psoriasis, especially valuable because no irritation of the surrounding skin was induced, even after prolonged rubbings. He uses the ichthyol in these cases alone and in its full strength.

In circumscribed moist eczema of the hands and arms, Unna has found ichthyol particularly useful, though he has also had

good success in the treatment of cases of papular itching, eczema, and also in the eczema of infancy. In the eczema of adults, ichthyol is employed in a fifty- to forty-per-cent. mixture with vaseline or adeps. For children a ten- to twenty-per-cent. ointment is appropriate.

Unna has found that in this preparation, as in all sulphur preparations, the best effect is obtained by beginning with a strong preparation and gradually diminishing the amount of sulphur as the eczema yields. From the first ichthyol acts as an antipruritic and as a sedative of pain. It seems to combine the virtues of carbolic acid and sulphur.

Ichthyol alone, among all sulphur preparations, can be mixed with mercurials and lead without decomposition taking place. The fact that it emulsifies with water permits ichthyol to be easily washed off,—a great advantage. One serious objection to ichthyol is its vile smell. Patients get accustomed to this, however.

Favus and acne rosacea have both been treated by Unna successfully by means of ichthyol. Altogether, the remedy seems worthy of a further trial; and, as I believe it can be procured of importers in this country, there is no reason why its value should not speedily be tested.

CICATRIZATION AND CORNIFICATION OF THE SKIN.

Unna (*Berlin. Klin. Wochenschr.*, August 27, 1883, and *Medical Record*) has also made a special study of the two processes involved in cicatrization of the skin. One of these pertains to the growth of granulations belonging to the connective tissues; the other is the formation of a corneous envelope, which appertains to the epidermis. Sometimes these two processes fail to work in harmony, the result being either that, while the granulations are abundant or even exuberant, the pellicle of epidermis fails to complete the healing; or, on the other hand, the granulation process is delayed, while the epidermic layer tends either to close over a cavity, or, by folding in upon itself, to produce callous, indolent edges; or, finally, it may dip down to the bottom of the unfilled excavation, with the result of a depressed cicatrix.

Unna thinks that these processes are so dissimilar that what would promote one might delay the other, and *vice versa*.

He therefore recommends the employment of certain local remedies up to a given point in the healing of a sore, and then that the process should be favored by a change to a "cornifying" application. Among the remedies which have a beneficial influence in promoting granulation, while tending to destroy or dissolve the corneous layer, may be ranked many of the so-called antiseptic remedies,—*e.g.*, carbolic acid, salicylic acid, corrosive sublimate, the bromine and chlorine compounds, acetic acid, permanganate of potash, thymol, pyroligneous acid, peroxide of hydrogen. Though in the dilute form in which they are generally used their "keratolytic" properties are not often injuriously developed, nevertheless Unna thinks their influence always more or less unfavorable to corneous growth.

Other remedies, though not unfavorable to cornification, are yet of no value in promoting this process. Such are iodoform, boric acid, benzoic acid, acetate of aluminium, the balsams, subnitrate of bismuth, and oxide of zinc.

There are a few remedies, however, which, in Unna's opinion, seem to have the property of promoting the growth or regeneration of the stratum corneum. Pyrogallic acid, surprising to say, is regarded by Unna as such a remedy. He says that, while it destroys the deeper tissues, it regenerates the cuticle. Sulphuretted hydrogen, which is produced when the sulphur alkalies or sulphur itself are used, has likewise a cornifying influence. Sulphur ointment is a convenient method of application. This reduces exuberant granulations even better than nitrate of silver. Sugar, chrysarobin, tar, and especially linseed-oil, may also be mentioned as keratoplastic,—the latter in particular, as evinced in the Carron oil so largely used for burns. The latter often heals when fats are not borne by the skin.

Finally, Unna calls attention to the importance of desiccation as a factor in cornification, pointing out that many remedies locally applied promote this process through abstraction of water. Many of the dusting-powders act in this way, though often considered inert; also such astringents as alum and tannin. The rubber bandage and other compressing agents aid cornification by reducing the amount of watery fluid in the skin and subjacent blood-vessels.

THE TREATMENT OF THE VEGETABLE PARASITIC DISEASES OF THE SKIN.

In a report on a new remedy in the treatment of ringworm, Dr. Ernest Besnier expresses himself as having no faith in parasitocides as such. He believes that there is no known drug which will kill the vegetable fungi inhabiting the skin without injuring the structure of the skin itself. The action of the so-called parasitocides is simply to promote desquamation, and the more rapidly desquamation goes forward, the more quickly is the fungus mechanically removed by the falling epithelial masses in which it is embedded.

CASE OF UNILATERAL SPASM, HEMIPLEGIA AND APHASIA, FOLLOWING MEASLES IN A CHILD TWO YEARS AND FOUR MONTHS OLD.

Read before the Philadelphia Neurological Society

BY LAMBERT OTT, M.D.,

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BOY aged 2 years and 4 months, healthy and intelligent, talked well for one of his years. April 2, he had a mild attack of mumps. Seven days later he was seized with premonitory symptoms which ushered in a well-defined attack of measles. Other children in the same house were just convalescing from this exanthem. No physician was called, and nothing more was done than keeping him warm in bed and administering an occasional purgative. On the tenth day after the beginning of the disease, the mother states that he felt well, was laughing and playing in bed, but, instead of the dull-yellowish stains which remain after the papules of measles have faded, his skin was dotted with spots of a purplish hue. The same morning the mother noticed a twitching of the muscles of the right eye and right side of face, and soon after similar movements of the right arm and leg. He remained conscious during the spasm, but was unable to speak, motioning for anything he wanted. After the spasm had existed an hour, the leg ceased to move, and was found to be paralyzed. Half an hour later the arm-jerk stopped, and the limb lay powerless by its side; the face-movements continued only a few minutes after the arm became quiet, when the side of the face was observed to be paralyzed. While the right-sided convulsive seizure was going on, the left arm and leg were affected with choreic movements, which subsided soon after right-sided paralysis was manifest. Two hours after the first appearance of the spasm, I noted the following condition: ptosis of right eye; no change in pupils,

and no disturbance in movements of eyeballs. When he cried, the right side of the forehead remained smooth, while the left was markedly corrugated; no paralysis of tongue, but complete aphasia. I was unable to investigate the special senses, on account of the age of the child. Motion in the right arm and leg was completely paralyzed, sensation partially. He was conscious, and drank water with very little difficulty. The left side of the body showed no disturbance of sensation or motion, excepting occasional choreic twitching. The dread the child had of strangers prevented me from examining the heart. Temperature, 101°; pulse, 120; respiration, 20, and very irregular. Some bronchial catarrh.

Second day. Temperature, 102°; pulse, 130; respiration, 40. Had no vomiting; intelligence remained good; tongue dry; passed water and feces involuntarily. During the next six days his fever remained high, cough increased, and evidences of catarrhal pneumonia developed.

About the ninth day the mother called my attention to a bulging of the right side of the chest, resembling the deformity produced by a large pleuritic effusion, with a marked lateral curvature of the spine, the convexity being towards the right side; percussion of the lung of this side elicited hyper-resonance and auscultation, normal breathing with prolonged expiration. The chest-deformity was apparently due to contraction of the muscles of the left side. He had conjunctivitis of right eye and dribbling of saliva from the right angle of the mouth. Was very irritable, and often carried his hand to his head and moaned. Urine examined and found normal. The choreic movements of left side returned, but were not so marked as at first.

In the second week the muscles of the face began to regain power.

In the third week there were no marked changes in his condition, except a peculiar swelling and tenseness of the paralyzed leg, which persisted four days, and suddenly disappeared during one night; the next morning the leg was very flabby. Electro-muscular contractility was fair. In the latter part of the third week his head was drawn to the paralyzed side, the chin pointing to the left, showing the peculiar influence of the healthy sterno-mastoid and other neck muscles, which was pointed out to me by Dr. Eskridge. The muscles of the right side of the neck were flabby; those of the left side were hard and tense. Lifting the head would place it erect, but when unsupported it would fall into its former position. In the fourth week movements were noticed in the arm, and in the fifth week the leg began to regain power. He was now, for the first time, using a few monosyllables, as *ma*, *pa*, etc.

In the fourth month he walked fairly, used a few more words, especially the simpler ones.

In the sixth month of his disease his general health was good, and he was talking more, but only using such familiar words as children learning to speak usually employ. His gait was fair, and he was able to run, but there existed a marked weakness of the flexor and extensor muscles of the anterior part of the right leg and of the extensor muscles of the right arm.

I look upon the case as one of embolism of the left middle cerebral artery, obstructing the first branch, called the frontal external and inferior, which supplies the third frontal convolution (convolution of Broca), wherein resides the centre of speech; also the second and third branches, called respectively the anterior parietal of Duret, or the artery of the ascending frontal convolution of Charcot, and the posterior parietal artery or the artery of the ascending parietal convolution of Charcot. These two latter branches supply the motor centres of the extremities (Ferrier). The fourth branch, which supplies the angular gyrus, was probably not obstructed, as vision remained apparently unimpaired.

The motor centre of the facial muscles occupies a region in close proximity to those of the extremities, which is also supplied by branches of the middle cerebral artery.

There are some marked peculiarities in the case.

First, the age of the patient,—two years and four months; second, there was no loss of consciousness, which Hamilton says is the exception; in most cases there is either partial or complete loss of consciousness; third, the disturbance of conformation of the chest on the ninth day after the spasm; fourth, the falling of the head to the paralyzed side twenty days after the spasm. Whenever he had a good night's rest, he was able to hold his head erect for two hours; after that time it lay to one side.

The order of recovery of the paralyzed parts was as follows. (First, it is well to recall that the lower extremity lost power first, next the upper extremity, then the face, and later the neck and chest.) In order of recovery, the face, neck, and chest showed the first signs simultaneously, then the upper extremity, and next the lower extremity. When considerable power had been regained, quite noticeable yet was the weakness of the extensor muscles of the forearm, which gave the hand

the peculiar position that resembles the wrist-drop of lead-palsy.

Most interesting of all was the occurrence of aphasia. Here an active little boy, twenty-eight months old, who talked connectedly and as well as usual for one of his age, was suddenly stricken with unilateral spasm, followed by hemiplegia and total loss of the power of speech. His intelligence did not wane one whit during the whole trouble. When thirsty, he protruded his tongue against the upper lip. If the parents told him the doctor was coming, he immediately manifested great fear, and beckoned for his mother to come near him. If he wanted some article in a distant corner of the room, he pointed his finger at it and began to whine. When they put their hands on the wrong article, he intensified his whine, by which they understood it was not what he wanted. As soon as they touched the desired object, a smile came over his countenance.

In the fifth week he spoke his first words, "pa," "ma," and "no." Later, other simple words were added to his vocabulary. The mother, a woman of experience, having had eight children, made a remark which struck me very forcibly, that it seemed as if he had to learn to talk over again. At no time did he misapply a word, as calling a "chair" a "table." When once he knew a word and its application, he always used it afterwards. At this date (nine months after the attack) his speech is disconnected. If he desires to express a thought, he can make a good beginning, but is unable to finish. For instance, he wants to use the sentence, "Katie, get my hat in the other room;" he can only say, "Katie, get my hat—" For the rest of the sentence he uses signs. His being unable to finish a sentence is not that he did not know the word "room," for when used otherwise he had no trouble in recalling it. When he used three or four words in succession, his speech-powers seemed to come to an end.

THE *Medical Index* is the successor to the *Kansas and Missouri Valley Index* and the *New Medical Era and Sanitarian*. It is a monthly, two-dollars per year. It is published in Kansas City, is well edited and neatly printed, and, taken altogether, is a highly creditable and representative journal.

A CASE OF OVARIOTOMY.

BY LEMUEL J. DEAL, M.D.

MRS. E. S., now about 31 years of age, was married when quite young,—about her sixteenth year. She had one child two years later. She was in good health until about eight years ago (1876), when she was treated for a severe attack of “inflammation of the stomach and the womb.” There followed this for some time a marked prolapse of the uterus, and she was troubled at irregular intervals with what, from her description of them, appear to have been epileptic seizures. These continued, off and on, until the date of operation.

In March of last year (1883) she was taken suddenly with considerable uterine hemorrhage, associated with severe paroxysms of “bearing-down pains.” The physician called very naturally diagnosticated a threatened miscarriage, and treated accordingly. Finding no relief, she sought other advice, when she was told that she was carrying a dead fetus, and was treated for this until August, when an attempt to bring away this fetus instrumentally nearly produced death.

She afterwards presented herself to Prof. Goodell, who diagnosticated an ovarian tumor. She passed into the hands of Dr. Foulkrod, of Richmond, who requested me to see the case with him, and who afterwards transferred the same to me for operation.

I found Mrs. S., whom I first saw on the 10th of December, suffering from attacks of severe neuralgia, proceeding from the left ovarian region, but at irregular times. These attacks had been scarcely, if at all, influenced by treatment. She had a large, distinct tumor, which I deemed to be a unilocular cyst, with some, though not marked, adhesions. It was readily moved, however, and was very firm and resistant. Abdominal circumference at this time was thirty-five inches.

Having determined to operate, I was unwilling to tap, and on January 14 I proceeded to remove the tumor, assisted by and in the presence of the following gentlemen: Drs. Cochran, McClellan, Thomas H. Andrews, John H. Locke, John K. Foulkrod, Robert J. Kelley, T. Mitchell Chaner, S. Mason McCollin, and my office pupil, Mr. C. W. Millar.

Dr. Locke having given ether, I made the ordinary incision in the median line, which was afterwards enlarged to seven and a half inches. The tumor was reached, punctured, and grasped by the large trocar of Dr. Wells, and evacuated. The fluid was of the consistence of thin gruel and

of a pea-soup color. The adhesions, which were mainly on the left and inferior portion of the tumor, were carefully separated, eight silk ligatures being found necessary. There was found a smaller cyst, which, however, was drawn out with the larger evacuated cyst without opening. The pedicle, which was thick, but very short, being not over one and a half inches long, was transfixed with a double silk ligature, each half of the pedicle tied tightly, and then tied as a whole. One small point was touched with Monsel's solution, and the pedicle was dropped into the cavity. After sponging the cavity out with a five-per-cent. carbolic solution, the wound was closed with silk sutures, iodoform sprinkled thickly over it, a pad of absorbent cotton placed thereon, and a soft flannel binder pinned over all. She was removed to bed, and reacted at once and well. Her recovery in its steady progress has been, to my mind, marvellous. There is absolutely nothing to note except the steady lowering of temperature and pulse to the normal.

The incision was made at 1.30 P.M., the last suture was tied at 3.15 P.M.,—making the duration of the operation one hour and three quarters. The patient received nothing for three days after the operation except water,—hot for the first thirty-six hours, and afterwards as ice. Milk with lime-water was given to her on the evening of the third day after the operation, and afterwards the beef peptonoids. The stitches were all removed on the eighth day, although I believe the wound had healed entirely on the third day. Her bowels were moved by use of an injection on the evening of the eleventh day; since which time the patient has been perfectly free from pain, quietly talking with her husband or nurse, and even reading. She is of a nervous temperament, decidedly emotional; but—and I believe it had much to do with the result—there seemed to be an utter absence of any fear of death.

RECORD OF SIGNS.

	Pulse.	Temperature.
Tuesday evening . . .	150	100.5
Wednesday morning . .	140	100.5
“ evening . . .	106	102
Thursday morning . . .	104	100.5
“ evening . . .	104	98
Friday morning . . .	100	100
“ evening . . .	106	101
Saturday morning . . .	98	100
“ evening . . .	100	99

	Pulse.	Temperature.
Sunday morning . . .	90	100
" evening . . .	100	99
Monday morning . . .	98	98
" evening . . .	116*	98

My especial thanks are due to Drs. McClellan and Andrews for their kind assistance and advice during the operation, and to Dr. Foulkrod, who, living much nearer to her than I, made her many visits for me, and to my pupil, Mr. Millar, who remained with her all night while there was any necessity; and, in fact, to all the gentlemen present, who kindly performed the duties requested of them in such a quiet and yet ready manner that it was observed by several that it would be impossible to have such an operation performed with less hurry or worry.

TRANSLATIONS.

THE PHYSIOLOGICAL AND THERAPEUTIC ACTIONS OF PAPAYOTIN AND PAPAIN.—Rossbach has recently published the results of his investigations made on these substances, from which it appears that there is the greatest difference in the activity of these preparations as found in the market. The preparation made by Christy, of London, possessed the strongest digestive properties; Merck's article is not more than one-half as active, while the papayotin prepared by Gehe, of Dresden, is almost completely inactive. It further appears that the addition of hydrochloric acid or phenol reduces the digestive power of papayotin, but even in four-per-cent. solution does not entirely destroy it; while ten drops of ammonia in ten grammes of a six-per-cent. solution of papayotin appears to have no effect on its digestive qualities.

Experiments as to the physiological action of these substances on living animals showed that their administration by the stomach facilitated digestion without (even when given in large doses of two to five grammes) producing any alteration in the mucous membrane of the alimentary tract.

Direct injections into the veins, as previously described, appeared to cause great

development of micrococci in the blood, and were always fatal within five minutes by producing heart-paralysis. Autopsies of animals killed by papayotin showed an abnormal color of the blood; while the red blood-corpuscles never run together in rouleaux, and appear often paler than normal; while the blood-serum is often red-dened.

In frogs, reflex actions are arrested five minutes after the administration, and the heart's contractions become very feeble; occasionally universal convulsions of spinal origin are produced.

Subcutaneous injections of small doses of papayotin (0.005 grm.) appear to have no effect. Larger doses produce within twenty-four hours a digestive softening at the point of injection, which spreads three to six centimetres in all directions. Rossbach believes that the papayotin is carried by the lymphatic vessels, digests their walls, and so gains access to the surrounding tissue. In doses of 0.05 grm., the nutrition of the skin is not destroyed, though the hairs fall out; and when the digestive fluid has been absorbed, the locality returns to its normal condition. This favorable result, however, only occurs when the papayotin solution contains small quantities of carbolic or boracic acid, or when it has been sterilized by repeated heating and the septic solution employed. When such precautions are not observed, abscesses are produced.

Larger doses (0.1–1.0 grm.) of sterilized solution produce digestive softening of the tissues without the formation of pus; but, since the nutritive vessels of the skin are destroyed, the latter undergoes dry mummification. No general effects were noted as following the absorption of papayotin so administered.

As regards the therapeutic application of these results, Rossbach calls attention to the following points: 1. Papayotin, administered internally, is perfectly innocuous. 2. For subcutaneous administration, only small doses of a sterilized solution must be employed. 3. When injected into the blood, papayotin acts as a paralyzing poison on the heart and nervous system. The use of this drug is applicable to the treatment of glandular tumors and cancers, where extirpation is contra-indicated. In croup and diphtheria, Rossbach recommends the use of the most concentrated solutions in severe cases, ap-

* Pulse-rise deemed to be due to irritation caused by stitches, which were then removed.

plied with a brush or allowed to flow through the mouth and nose. The drug may further be employed as a digestive assistant and as an addition to nutritive enemata.

As regards its application in the treatment of gastric cancer, skin diseases, and parasitic diseases, his investigations are not yet numerous enough to warrant any conclusions.—*Centralbl. f. d. Med. Wissen.*, January 5, 1884. s.

A CONTRIBUTION TO THE ANATOMY OF THE CENTRE OF SPEECH.—Rüdinger has made a large number of examinations of the third frontal convolutions in the lower and anthropoid apes, in microcephali, deaf-mutes, and in human brains of different races, sexes, and cases of marked individuality; these investigations show that in all probability there is some connection between the lateral half of the frontal brain in the neighborhood of the opercular gyrus (Broca's region) and the ability of speaking, though he admits that a positive proof that the centre of speech lies in the third left frontal gyrus can only be proved by experiment. If, however, this portion of the brain had any function connected with other muscular motion or general sensibility, it should be well developed in apes and microcephali, in whom general muscular power and sensibility are normal; this, however, is not the case. Dr. Fischer finds that in apes and microcephali this convolution is merely rudimentary, and, while it is not rudimentary in deaf-mutes, it is, however, much less developed and complex than in cases of individuals marked by rhetorical power.—*Centralbl. f. d. Med. Wissen.*, January 26, 1884. s.

UNUSUAL COMPLICATIONS OF ACUTE RHEUMATISM.—In a recent contribution to the study of acute rheumatic peritonitis (*Thèse de Paris*, 1884), Dr. A. Vivant carefully reports nine cases of peritonitis occurring during the progress of acute rheumatism, one of which occurred under his own observation. He concludes that (1) rheumatic peritonitis, of all the localizations of rheumatism, is the least frequent, but it is less rare than is generally supposed; (2) women are particularly predisposed to it; (3) from the point of view of morbid anatomy, the peritonitis often ceases at the period of fluxion, but it may terminate in a serous or even a purulent effusion in the peritoneum; (4) it is not always as benign

as authors regard it, since cases of death are of sufficiently frequent occurrence.

Dr. Schmitt (*Thèse de Paris*) collates seventeen cases of rheumatic phlebitis, one of which was under his observation. From a study of the symptoms, he considers that for the most part the phlebitis is not truly primitive, but is really a thrombosis, due to hyperinosis of the blood. The condition occurs most frequently in the lower extremities, and especially on the left side. It may occur at any stage of the fever, and may give rise at any moment to pulmonary embolism, with all its terrible dangers and rapidly fatal effects.

Angina pectoris of rheumatic origin is the subject of a thesis by Dr. A. Martinet, based upon the reports of one original case and five collated. The author considers the rheumatic angina to be due to hyperæmia of the cardiac plexus, as first taught by Dr. Peter.—*Gazette Médicale de Paris*.

SPLENIC ENGORGEMENT IN LEUCOCYTHÆMIA TREATED BY PARENCHYMATOUS INJECTIONS OF FOWLER'S SOLUTION.—In the clinic of Professor Mosler, of Greifswald (*Gazette Médicale de Paris*), a man with an enormously enlarged spleen and leucocythæmia was treated by injections of Fowler's solution (1 ccm.), of which he had ten in eight weeks. Under this treatment the spleen diminished sensibly in volume. A caution is given against using these injections in hæmophiles. It is also recommended that preliminary to the injection the patient should take some remedy capable of inducing contraction of the spleen, and, after the injection, ice should be applied to the spot of puncture for several hours. [Perhaps it would be as well to apply the ice and administer quinine and ergot for a while before resorting to the injection. It seems that they might be just as efficient and less dangerous. Professor Kussmaul lost a case after an injection of sclerotic acid into the spleen, apparently from penetration of one of the splenic vessels.]

HYPODERMIC INJECTIONS OF IRON IN ANÆMIA.—In the *Archiv für Experimentelle Path. u. Pharm.*, Dr. Glaewecke highly extols the subcutaneous method of administering the iron salts. He prefers the citrate of iron, and gives from one and a half to three grains, in the adult; in children, never more than half a grain.

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EDITORIAL.

IS EMBRYOTOMY JUSTIFIABLE
WHILE THE CHILD IS LIVING?

IN an editorial upon the admirable address recently delivered before the Washington Obstetrical and Gynæcological Society by the President, Dr. S. C. Busey, a contemporary quotes with approval the following words of Dr. Barnes: "A law of humanity allowed by every creed, and obeyed by every school, tells us, where the hard alternative is set before us, that our first and paramount duty is to preserve the mother, even if it involve the sacrifice of the child."

We believe that exception may justly be taken with Dr. Barnes on this subject, both as to fact and inference. It is not at all correct to say that embryotomy, or the operation of killing the foetus, solely in the interests of the mother, is a law of humanity; nor is it allowed by every creed; nor is it obeyed by every school. To vindicate the humanity of the medical profession,—what creeds allow, we do not here wish to discuss,—we would ask a brief consideration of the question from both an historical and an ethical standpoint.

Turning to our earliest medical works, we find that Hippocrates directs the mutilation of the body of the child *after death only*. He says, "Ὁλοσα δὲ τεθνεῶτα τῶν ἐμβρύων".*

Celsus says nothing about mutilating a living child. His words are, "*verum intus emortuo corpori*", etc.†

In more recent times the Arabian physicians appear to have been the only ones

who countenanced or advocated the destruction of a living child for the sake of the mother. The celebrated Rodericus à Castro says, "*puer tamen vivus dissecari nulla ratione debet, quamvis Avicenna, Ætius, et Moschio id præcipiant; non enim licet unum interficere, alterius vitæ gratia, sed implorato divino auxilio medicamentis insistendum.*"‡

A recent writer, and one most capable of judging, gives a different account of the ability of the celebrated Arabian physicians from that generally held and taught, and no doubt his criticism is in the main a just one. Certainly there is nothing to be found in the writings of the Arabian writers that would warrant recognizing them as authorities to guide our practice in the nineteenth century. Palgrave says,—

"The Arabs are not uncommonly supposed in Europe to have been, if not the authors, at least the restorers of the healing art. But this is a popular error. Whatever the Eastern physicians of Bagdad, or their Westerly brethren of Cordova, might know, was derived from translations of Hippocrates or Galen, from the Physics of Aristotle and the treatises of Celsus, embodied in Byzantine compilations and the works of modern Greece. These, rendered with more or less accuracy into the vernacular tongue, and in the hands of men who had, without exception, so far as I have been able to investigate, nothing of the Arab except that they wrote in Arabic (much in the way that a Prussian of Dusseldorf may occasionally publish in French), and that they professed the Mohammedan belief, became at once the base and the superstructure, the Alpha and the Omega, of the whole science; to this their successors added nothing, unless it be some scanty and inaccurate lists of Persian, African, or Egyptian herbs; and their confused and unscientific treatises have remained to the present day the *ne plus ultra* of Arab medical learning. But even their first glimmerings of science and of method were soon effectually closed and cross-barred by Islamic immobility and its misplaced supernaturalism. The traditional sayings of Mahomet, whether really his or not, but which, at any rate, are little calculated to give the Prophet place among the ranks of those who can heal the body, were intermixed with or substituted for the formulas of Galen and the precepts of Hippocrates; and to deny or evade the hygienic theories of the Meccan camel-driver might render one suspected of heresy at the least, and bring down the most awkward consequences. The fated and all-pervading interference, for such Islam makes it, of the Divine Omnipotence came in to preclude research by reducing every phenomenon at once to the one immediate, universal, and arbitrary cause, and thus cut every knot instead of untying it. Moreover, autopsy and anatomical studies were held, and still are so, in horror, because a violation of the rights of Munkar and Nekeer, the grave-angels; while to insist on the healing or noxious qualities of this or that, appears a downright transfer

* In the 70th section of the first book on Diseases of Women. See Littré's edition, vol. viii. p. 146, and also the edition of the Sydenham Society, vol. i. p. 112.

† Celsus, lib. vii. c. xxix.

‡ De Universa Muliebrum Morborum Medicina, lib. iv. c. vi. (Coloniz Agrippinz, 1689).

made to the creature of an honor exclusively due to the Creator. This is no exaggeration. Not one of these ideas but I have heard fifty and a hundred times from orthodox and otherwise intelligent Muslims. Thus, without knowledge alike of the human frame and of the chemical pharmacopœia, precluded from experimental science and rejecting theoretical, they came at the very outset to a dead stand, and there to the present day they have remained, crystallized, one might almost say, in complacent and conscientious ignorance."*

In the *Dictionnaire de Médecine*, tome xi. p. 319, the article "*Embryotomie*," written by Desormeaux and Paul Dubois, says, "We shall not end this article without calling to mind that embryotomy, to which English and German accoucheurs often have recourse when nothing announces that the fœtus has ceased to live, and in the sole interest of the preservation of the mother, is practised in France *only when there is every reason to believe the fœtus to be dead*."

We believe it would be more correct to say that the destruction of a living child in order to save the mother has never been allowed by the best men in our profession from the earliest times until now, except by Arabian, and German, and English midwives. At all events, it is as great a mistake to say it is "obeyed by every school" as to say "it is allowed by every creed."

We make these remarks not in a captious spirit, but because such doctrine as that taught by Dr. Barnes has much to do with the fearfully prevalent crime of fœticide. If it be taught as allowed by all creeds and obeyed by all schools that in order to preserve a woman's life her child may be destroyed, a woman may easily persuade herself that this may be done to preserve what she values far more than life,—her own honor, and the peace and social position of her family.

DURING the meeting of the American Medical Association in Washington the headquarters will be at the Arlington House.

* Narrative, etc., by William Gifford Palgrave, vol. i. p. 247.

REMEDIES FOR OBSTINATE HICCUGH.

ELECTRICITY has been recommended in obstinate hiccough, and is often followed by prompt relief. The method of application is as follows: The spasm of the diaphragm is to be anticipated by a discharge of electricity passed through the chest from side to side; or galvanism may be used, by passing a distending current along the phrenic nerve, the anode being placed over the clavicle, the cathode just below the ensiform cartilage. A domestic plan which is often successful is to sip a glass of cold water, taking eight or ten swallows in succession without breathing. Another plan, which has been lately recommended by Dr. Henry Tucker,* is to soak a lump of sugar in cider vinegar and let it dissolve slowly in the mouth. Compression of the chest is advocated by Shaw,† of Cincinnati, who states that he has often succeeded in this by following Dr. Kinnaid's procedure,—namely, "Place the tips of the fingers of both hands in the position of complete supination against the abdominal muscles, at the lower and outer junctions of the epigastric with the hypochondriac regions. Now make firm and gradual pressure backward and upward against the diaphragm. This pressure should be continued for some little time after the diaphragm has ceased its spasmodic contractions, when the fingers should be very gradually withdrawn."

Dr. Ruhdorfer‡ reports a severe case of hiccough, lasting for three months, which morphia, given hypodermically, could only check for a few hours or days. It resisted all the usual remedies, such as quinine, alone and with extract of belladonna, tincture of castoreum, or tincture of valerian, in water or with aromatics, mustard poultices over the stomach, dry

* Southern Medical Record.

† From the Medical Record, in the American Practitioner.

‡ American Practitioner; from the Allgemeine Wiener Medizin. Zeitung.

cupping down the spinal column, chloroform, ether, zinc, bismuth, numerous emetics and purgatives. The patient dragged on for three months under various remedies, morphia being administered whenever a single attack lasted beyond eight hours. At last the attack became overpowering, and the hiccough was so loud that the patient could be heard outside the house, through two doors. She sat up in bed, supported by her parents. There were dyspnoea and cyanosis. The head was jerked in all directions, the pulse was small and frequent, the neck was distended. Dr. Ruhdorfer injected a solution of pilocarpin hydrochlorate (three centigrammes in a gramme of water). The hiccough was at once cured, as if by magic, and has never returned since.

NURSE-TRAINING SCHOOLS IN PARIS.

THE *Progrès Médical*, in a recent issue, while republishing some general statements contained in these pages upon the importance of nurse-training schools and the need of skilled nurses, kindly adds a note in which it directs attention to what has been done within a few years in France in this important matter. Our thanks are also due to Dr. Bourneville for his courtesy in sending a report of the last meeting for the distribution of prizes to the scholars of the municipal nurse-training schools of the Bicêtre, La Salpêtrière, and La Pitié, and for a copy in three volumes of the "Manuel pratique de la Garde-Malade et de l'Infirmière," second edition, which are in these institutions used as text-books for the students. These books are well printed and illustrated, and contain elementary scientific information, written in lucid, popular style, on anatomy and physiology, dressings and medicaments, and a dictionary of medical terms, which are useful not only for trained nurses, but also for mothers of families. From them we

learn that, owing to the agitation of the subject and personal attention devoted to it by Dr. Bourneville, the schools for nurses were opened in 1878 at the Salpêtrière and the Bicêtre, and in 1881 at La Pitié, under the control of the municipal council; they are all in a flourishing condition, and, from the synopses of the lectures, the systematic instruction, and the questions required to be answered, it may be justly inferred that these schools are doing a great amount of good. If in this country we had fewer medical colleges and more nurse-training schools, the community and the profession would have cause for being sincerely grateful.

MEDICAL REQUIREMENTS OF PASSENGERS ON SEA-GOING VESSELS.

IN another column we present the full text of a bill prepared by the committee of the American Medical Association and introduced to Congress in accordance with instructions. The necessity for such enlightened legislation is becoming every day more evident; and this bill, if adopted, will go far towards correcting some flagrant abuses, and preventing unnecessary hardship to passengers in cases of sickness, by requiring proper hospital accommodations and competent medical attendance. If the allowance of air-space in each hospital seems small (eighteen square feet for each fifty persons), it must be remembered that vessels are not usually provided with as much spare room as the "Great Eastern," and, moreover, on a vessel capable of carrying two hundred passengers (with the officers and crew additional) this would give two rooms of six hundred and thirty cubic feet each as the minimum, which, with the abundant facilities for ventilation, would probably be sufficient for all ordinary demands. We hope that, if the bill be passed, it will not be allowed to become a dead letter, but will be enforced in spite

of the active or hidden opposition of the large steam-ship companies.

LEADING ARTICLES.

KOCH ON THE CAUSATION OF TUBERCULOSIS.

THE second volume of the Reports of the Imperial Board of Health of Germany, edited by the director, Dr. Struck, which has just been issued in Berlin, contains several important articles upon the relations of micro-organisms to disease. Dr. Robert Koch contributes one on the Etiology of Tuberculosis, written just before his departure for Egypt, which deserves careful study. Acknowledging that the results of clinical observation as to the communicability of tuberculosis have been inconclusive and uncertain, although suggestive cases have been reported, he claims that anatomical facts have established the truth of Buhl's theory of infection from caseous foci, and it is still further supported, among others, by cases of tuberculosis of the thoracic duct, observed by Ponfick, and in the veins, reported by Weigert. Experimental research has fully demonstrated (in the hands of Klencke in 1843, and later by Villemin and many others) the communicability of tuberculosis by inoculation. The doctrine having thus been established by concomitant evidence from clinical observation, anatomical facts, and clinical research, it became necessary to take the next step and inquire into the nature of the virus; the discovery of a micro-organism (the bacillus tuberculosis), with the study of its properties, has resulted, he says, in the accumulation of so much evidence, that all that the most extreme sceptic can now assert is that the bacillus is a concomitant and not the cause of the disease. In order to prove conclusively its causal connection, it remained to be shown, as in the case of anthrax, that the organism, after isolation and cultivation, could reproduce tuberculosis when inoculated in the body.

After this preface, he proceeds to describe the technique of the methods of examination and recognition of the bacillus tuberculosis, and describes the habitat and distribution of the bacilli in the nodules, which is not uniform or regular. In

miliary nodules, bacilli are apt to appear both between and in the cells, which soon break up, and the bacilli then disappear. The giant cells are wandering cells which the bacilli penetrate and cause to become stationary and take on epithelioid and giant forms under the action of the parasite. When caseation or degeneration occurs, the bacilli soon disappear or break down into spores.

In human tuberculosis, both the acute miliary form and pulmonary phthisis, the bacilli were uniformly present in the cases examined. In the former they were discovered in the lungs, liver, and spleen, in the pia mater, in the ocular choroid, and elsewhere. In the latter they were found most abundantly in recent caseous infiltrations, and in the walls of rapidly-forming cavities, but most sparsely in the fibroid variety. They may be disseminated by the lymph, the blood, or by the inhalation of the contents from cavities into healthy portions of the lung, or by swallowing sputa. The occurrence of bacilli in the sputa may now be regarded as quite diagnostic. They also occur in the stools in intestinal tuberculosis.

In a third section the occurrence of the bacillus is described in tuberculosis of various organs,—ulcer of tongue, two; renal, four; one of bladder, and one of the uterus. In five cases of tuberculosis testis bacilli were sparsely found, and two cases of solitary tubercle of the brain. In various scrofulous affections, lymphoma, and in various tubercular, joint, and bone affections, bacilli were found,—even in spinal caries. In lupus the bacilli were scanty; it has been found that inoculation with lupus tissue produced tuberculosis in the rabbit.

Inoculation-experiments made upon the lower animals showed, in Koch's experience, that all warm-blooded animals are susceptible to the action of the virus, yet the resultant lesions vary in different species. In some, caseation is the main outcome; in others, early softening with suppuration occurs, without caseation. He noted also that the lesions of tuberculosis infection in various higher animals are apt to undergo calcification and caseation. In the farm-yard fowl these degenerations may assume the appearance of large tumors filled with lime salts. "In spite of these morphological differences, the disease is in essence the same, and the bacillus is to be met with

in all its forms." He specially describes the seat and distribution of bacilli in tubercular disease of cattle ("Perlsucht"), of the horse, pig, goat, and sheep, of the fowl and monkey. He notes the rarity of spontaneous tuberculosis in the guinea-pig and rabbit, unless under conditions suitable for contagion. For, previous to experimentation on this subject, he had hardly met with the disease in the many hundreds of such animals examined, until some part of the laboratory was devoted to the creatures which were inoculated; then tuberculosis appeared among others which were not inoculated. The "spontaneous" disease differs from the "artificial" in these animals in being limited to a few foci in the lung, instead of having a wider dissemination. A section is then devoted to the artificial production of tuberculosis in animals and the variety of appearances produced. This portion of the work, which is most richly illustrated by many beautiful chromo-lithographs, closes with a summary, which may be thus briefly paraphrased: In all morbid products which, from their mode of growth, histological characters, and infective properties, may be regarded as truly tuberculous, certain rod-shaped bodies, reacting to special staining agents, are to be found. This is true of animal as well as of human tuberculosis, and the number of separate observations is large enough to infer that the association is constant. Even in the two exceptional cases in which the pus of tuberculous abscesses (one spinal, the other renal) contained no bacilli, the probability that the diseased source of the pus contained bacilli amounted almost to certainty. These bacilli have never been found in other diseases, and statements to that effect must be set down to erroneous observation or incorrect application of methods of research. The bacillus occurs in the very earliest formations; it seems to induce cell-accumulation, giant-cell formation, and ultimate destruction of these elements. The presence and number of bacilli are undoubtedly connected with the rapidity of the progress of the disease. These facts point to more than a merely concomitant relation, and necessitate the further study of the life-history of the bacillus, which can only be done by methods pursued in the investigation of other bacterial diseases, by isolation of the organism and its cultivation outside

the body. To this subject he then applies himself, but space does not permit us to detail the methods employed for this purpose. After that he describes at length the infection experiments,—first, those made by inoculation with tuberculous tissues, and, secondly, those made with pure cultures of the bacillus. These latter include inoculation of the anterior chamber of the eye, of the peritoneal cavity, intravenous injection, and experiments of inhalation. We know the results of this research, and how upon it the doctrine of contagium vivum in tuberculosis has been based.

In the final pages of this monograph the whole bearings of these researches are summed up. The fact that the tubercular bacillus can only grow under certain conditions (in blood-serum and flesh infusions, and at a temperature above 30° C.), which are only obtainable in the living body, that it is in fact a true parasite, and not an occasional parasite like the anthrax bacillus, is so far encouraging as affording more hope from prophylaxis. Nor is there any evidence that a harmless, non-pathogenic bacterium can ever develop into this specific kind; but there is also little ground for hope that the virus can be "attenuated." The bacillus has been shown to retain its infective properties for very long periods, even in the presence of decomposition. Pulmonary phthisis and tuberculosis of the domestic animals are the diseases which maintain the contagium, and in phthisis the sputa form the chief medium of transference. No doubt the bacillus is inhaled with dust, and, like dust, may remain in the air-passages or be taken into the alveoli; but its further development depends upon many conditions, one of which is its slow growth. Under certain circumstances, when the bronchial mucous membrane is denuded (as in measles), or when, from adhesions, defective formation of chest-walls, etc., there is a tendency to stagnation of air and accumulation of secretion in parts of the lung, there is greater likelihood of the parasite taking root. But it is quite possible that the bacillus may sometimes gain entrance into the body in other ways,—*e.g.*, in water, since it has been found in the intestinal evacuations; and he believes cases of lymphatic tubercle are often due to the virus gaining entrance through abrasions. The second source of the tuber-

cular virus concerns its entrance with food, as in consumption of the flesh or milk of tuberculous animals. That this is far less frequently the source of human tuberculosis seems clear from the comparative rarity of primary tubercle of the alimentary tract, and it seems also, from facts of intestinal infection in cases of phthisis, that this requires the introduction of spores, which resist the action of the digestive juices more than the bacillus itself. The same applies to milk, and, moreover, this secretion only contains bacilli when the mammary gland is itself tuberculous, which is rare.

When the bacillus has gained entrance into the body, whether by wounds of the skin, by inhalation into the lungs, or by the alimentary tract, it excites cell-formation, and subsequent necrosis where it lodges; and the morbid process extends probably through the medium of the "wandering cells" of the tissue, until the action of the parasite they convey brings them to a stand; and wider extensions are readily explained by means of the lymphatic and blood-streams. The identity of the various forms of tubercular disease in man must be admitted; and, although positive proof is yet wanting, it is right to act on the doctrine that the human disease is identical with that which is manifested so variously among the lower animals. Differences in the manner of invasion, in the organs infected, and in the proclivity to the disease, must be attributed to individual predisposition, and to the conditions surrounding each case. Often such "predisposition" is explicable on anatomical grounds; and it is to be noted that the disposition to become the seat of the disease may vary at different periods in the same individual. As to heredity, for which little support is given in the rare occurrence of congenital tuberculosis, Koch briefly dismisses it as an argument against the infective theory, by asserting that it is the "disposition," and not the disease, which is transmitted. This infective theory, he repeats, is not new: it has only been confirmed by these researches. Its acceptance, and the evidence that tuberculosis is dependent on a parasite, demand energetic study of therapeutic and prophylactic measures, although on the former head there is less reason to hope for success than on the latter. But, although prophylactic measures are needed, the

wide distribution of the disease requires that all endeavors in this direction should take into account social relations, and one must carefully inquire in what way and how far such measures may be carried out without undue disturbance and injury.*

Those who are interested in the subject particularly will do well to read the original report, which carries with it the conviction of the honesty and industry and ability of the author. *The Lancet* (from the columns of which we have freely drawn in this article), speaking editorially, says, "We are inclined to agree with Dr. Koch that the validity of his views is not to be shaken by clinical facts, since without any outrageous use of the imaginative faculty explanations are readily forthcoming. Not every one that is exposed to the virus of scarlet fever takes the disease. Some are proof against the poison; some do not offer a suitable soil for its development; or conditions which may favor its development in an individual at one time may be absent at another. There are undoubtedly dispositions to phthisis and inherited tendencies, but these do not disprove the fact that the real *disease* can only be acquired. The tubercular virus must be very ubiquitous, seeing how common is the malady and how little prepared we are to treat it as contagious. Every one is more or less exposed to it, inhaling it with the dust of the air; and the fact that many of those even who are the most directly exposed to it—as the officials of consumption hospitals—escape tells quite as much in favor of their lack of predisposition and their good general sanitary surroundings as against the view that tubercular disease is infective. As to the treatment of this plague, plainly the main lines must be in the direction of prophylaxis. It is idle to attempt to deal with the micro-organisms in their habitat. No inhalations of antiseptics can do more than check putrefactive change; they cannot penetrate to the recesses of the lung where the "tubercle" is advancing; and equally futile is it to try to kill the bacillus by remedies taken into the stomach or injected into the blood. The most that can be done is to improve the general nutrition, or to check the advance of the disease by changing the conditions that favor it. Let us honestly recognize this, and seek rather to prevent

* London Lancet, March 15, 1883, page 494.

individuals becoming tuberculous, and not attempt the impossible feat of slaying this microscopic parasite. Thus one direction in which prophylaxis will have to work will be to destroy the virus outside the body, to employ germicidal agents in the disinfection of the ejecta, and to use suitable precautions in dealing with the sick. To accomplish this without altering one whit the comfort and care bestowed upon the victims of the malady, and without introducing a real misery into social life, must be the next step taken by those who have apparently so conclusively shown the nature of the evils to be remedied; and that such is Dr. Koch's intention is shown by his remarks in the closing lines of his report."

We can but repeat the warning against the anti-parasitic treatment of phthisis, the adoption of which was due to a hasty and ill-considered application of the new theory of the etiology of consumption. It must be evident that, the bacilli being ubiquitous, the clinical problems—the prophylaxis and the treatment of phthisis—remain questions of the patient's nutrition, rather than of bacilli development and destruction. Tuberculosis, it would seem, is best prevented and treated by measures which shall increase the vital resistance of the organs and render the tissues of the individual an unsuitable soil for the reception and development of microbes of any description.

A deeper significance now becomes apparent of the celebrated clinical observation of Niemeyer, that the great danger of a consumptive is that he may become tuberculous.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

IN the absence of the usual keen east winds of this time of year in the British Isles, the death-rate has been very low, comparatively. There is some epidemic disease about, as measles and scarlatina, but their effect upon the Registrar-General's returns is slight. Bearing upon the question of the spread of infectious disease, I see that the Border Counties branch of the British Medical Association has presented an address to Dr. Michael Waistell Taylor, of Penrith, in Cumberland, on his retiring from practice in

that town. In it reference was made to the fact that Dr. Taylor was the first person to link the spread of infectious disease with the milk-supply of a town. In his reply Dr. Taylor said, "You have referred to some observations on the history and etiology of fevers, and more particularly to observations on the propagation of fevers by milk. These, to me, present an old and curious story, reaching back to the year 1858, when these observations were first begun. After a time, it seemed to me that the discovery of these facts fell dead and flat and became wellnigh forgotten, for it failed in receiving corroboration from others, and I myself began to think there might have been some error in my facts or in the logic of my reasoning. But years rolled on, and twelve or thirteen years after I had the satisfaction myself of verifying the circumstance for the second time. Soon after fresh proofs came from many quarters, and it was the source of the greatest gratification to me to find my old problem corroborated by other observers, and that what had been regarded as a dubious occurrence came to be recognized as a positive and general law of infection in sanitary science." It was not, indeed, till the late Dr. Charles Murchison, the great authority on fevers, could trace an outbreak of scarlatina in Marylebone, some ten years ago, to the milk-supply, that Dr. Taylor's original observations were generally credited. Since then the world at large has wakened up to the fact that milk is a fluid which, from its composition, seems to possess the unfortunate property of carrying fever-infection (let them be germs, or bacteria, or what they may) with deadly certainty of its being received in an active infective condition. Anterior to that time the fact of milk carrying infection was known in my father's household. He brought home with him, from a patient, smallpox, which I, and afterwards my sister, took, though he never was ill himself. At the time scarlet fever was raging in the village. When I sickened, of course scarlet fever was suspected; but soon the eruption showed itself to be vesicular in modified smallpox, having, fortunately, been re-vaccinated a short time previously. The attack was mild, and so was my sister's, though the original patient had it in a very bad form. A family living in a cottage half a mile away from the village, and thoroughly isolated, used to come to our house for their milk. The children sickened, and, to the surprise of all, they also had smallpox (modified), and not scarlatina. The milk-supply was the sole communication between the two dwellings. Indeed, it is owing to Dr. Taylor's observations, and what came out of them, that the leading dairies of London are models of what dairies ought to be for cleanliness and the safeguards used to prevent the possibility of infection by the milk supplied to customers. In one case, however, in a very

well known dairy, fever broke out along their route of supply, and careful investigation discovered that at an outlying farm in the country, from which milk was taken by this company, there was an outbreak of fever. These facts, instead of "what had been regarded as a dubious occurrence," are now generally recognized.

The shuffling of political cards sometimes leads to unexpected results, and one, if not the least curious, is the active interest manifested in the dwellings of the very poor at the present by the Conservatives, or party in opposition. The government thinks it time to extend the franchise, pretty certain that the result will be an addition to the Liberal ranks. The other side see this, and immediately find that their poor neighbors live in dens unfit for human habitation. "The poor ye have always with you," it is written, and, though times are bad and trade slack, the loaf is cheap, and the present winter has been a wonderful workingman's winter, for there has been no stoppage in the building-trade and no frozen-out gardeners perambulating the streets, as often is the case. It would seem it is hardly the necessities of the poor, but the necessities of political faction which cause so much attention to be given to the poor by the great land-owning class, which is distinctly conservative. Many peers own large tracts of land on which exist some of the foulest slums; but they retort, probably truly enough, that the ground-landlord has extremely little or no power over the tenants, in consequence of the practice of sub-letting which exists. Oddly enough, just at this very time the habits and practices of the upper tier are impugned by one of themselves,—viz., Lady John Manners, who accuses them of wasteful extravagance in dress and in food. As to the last, it seems that the first meal is a little tea and coffee with bread and butter, and in some cases a little brandy in the coffee, or even lemonade and brandy, to enable the patricians to get up and dress. At ten o'clock a substantial breakfast is served,—meat and sweets. Then, at two, comes a lunch of such solid quality as to entitle it to be called early dinner. At five there is tea, not a very heavy meal, and then at eight comes dinner, a long and elaborate affair. So much for the eating. What the amount of drinking is is not stated, but probably it is not great, as now it is not the wines so much as the solid food which makes up the cost of dinners. Such are the self-denying practices of a class who are penetrated, rather suddenly, it must be admitted, with a keen sense of interest in the housing of the proletariat. A commission has been started, on which the Prince of Wales has a seat, and, in order to enable him to go into the question thoroughly, his Royal Highness personally visited some of the poorest neighborhoods of Holborn a little time ago, in company with Sir Charles Dilke. Doubt-

less what he saw impressed him and will bear fruit. The poor live in very dismal surroundings, amidst dirt and squalor, many because they cannot afford anything better, others because the less rent they pay the more they have to spend in drink. The effects of these large palatial buildings, rising story upon story, taking their origin in Mr. Peabody's benevolence, have been no boon to the very poor. They cannot afford to live in them, and the rookeries pulled down to admit of the erection of those new buildings were the homes of many destitute who must crowd elsewhere. They must reside somewhere and have something which they call "home." And so Dives is going to investigate the condition of Lazarus when it is convenient to do so in order to hamper the operations of a Liberal government. Perhaps it may be of interest to some of your readers to know what we do for our poor in this country. We build large, airy, roomy workhouses in which the destitute can live when they cannot maintain themselves or do not choose to do so, and it is asserted that the guardians of the St. Pancras Union are sorely troubled with a lot of lazy scoundrels who live in their workhouse in idleness and who assert their inability to find employment outside. St. Paul's statement, "if ye will not work, neither shall ye eat," does not hold good there, evidently. For the sick there are parochial infirmaries, to which I can bear my personal testimony that the inmates are well cared for and treated kindly,—indeed, tolerably well spoiled, some might think. It is no great hardship to reside in these habitations; but then a large number of the poor would sooner die than enter their portals. There is the hateful, intolerable bath to be encountered first; then the order and cleanliness observed are scarcely to their liking. If there were an hour or two of the public-house and a drunk and a squabble to finish off the day, then these retreats would be more attractive, and the inmates would reconcile themselves to their lot with Christian resignation. But it is not likely the rate-payers and the authorities will oblige them quite so far as that: so they huddle together, not like pigs in a sty, but rather like herrings in a barrel, all sense of decency and modesty ground out of them by their surroundings. It is simply farcical to talk of morality under the circumstances. Animal pleasure is within their reach, and of that they avail themselves to the utmost. When sickness seizes them, there are the hospitals and the dispensaries supported by voluntary contributions, to which they can apply. There are also parochial institutions to which they can resort, where the parish finds the drugs and the medical advice, but whenever practicable they prefer the private charity, where no questions are asked. They are obviously poor enough to be fit objects of charity; so they keep out of the way of the parochial officials until the

end comes, when the parish doctor is summoned.

Say it is the father of a family temporarily ill : here a little help, and all soon gets right. But, under other circumstances, the relieving officer offers them "the house," instead of out-door relief. Say it is the husband broken down by hardship and drink, and the wife by partial starvation. It is useless to give them a dole and so permit of their existing on in dirt and misery,—no kindness to them at all. They must necessarily be ill under such circumstances. So it is decided they must go into the house. Not they ; they are not going to be parted ; they are man and wife, and at this critical moment evince a mutual attachment of which they at other times would scarcely be suspected. They will not be parted ; they'll do somehow. And so they perish like beasts in their lair. Or say one of a poor family is ill with consumption and about to die. Sooner than go to the parochial infirmary, they will move heaven and earth to scrape up money for a cab,—perhaps a sister earns it at the sacrifice of her person, while the mother finds an in-patient's letter somewhere,—and off they set for a chest-hospital, where they mean to leave the invalid, hook or crook, so that she may not die in the workhouse. Talk of the importunities of the woman who wore out the endurance of the unjust judge ; they are a trifle to those of an Irish family who are determined it shall not be said that one of them died in "the house." The harshness of Sassenach tyranny is exhibited to them, they feel, when they go away baffled, but they have the consolation that brother Tim is away with O'Donovan Rossa to get the dynamite with which the down-trodden Celt is going to revenge himself upon his Saxon oppressor.

The poor of London have their ways ; but no one can deny that, if he has little religious feeling, when judged by ordinary standards, still he is a kindly-hearted fellow. One great trouble in all metropolitan institutions is the prevention of alcohol being brought in by relatives visiting an inmate on their periodical visits. And yet, out of their small earnings, a bottle of spirits means two days of hard unflinching work to obtain the money to buy it. Their kindness to each other in this way, often neither good nor desirable, is marked, and their position often brings out good qualities little suspected. Bryant & May's match-girls are a feature of the East End. Initiated into the vices of maturity in childhood, she can hold her own in filthy language with the best of Billingsgate or Ratcliffe Highway ; there is no word too foul for her lips. Into her private life it is undesirable to pry. Her ambition is to possess one of the red corded dresses which form their Sunday wear. For this she will save up for months, and when she has attained one her earthly happiness is complete. On Sundays she turns out with

her young man to enjoy themselves, which means to stop at different public houses and drink more than is good for them, her "mate" allowing her a fair share of what is going, with a curious sense of honor. Betwixt these halts the great diversion is to chaff those they meet and exchange compliments in language of indescribable foulness. With this one day of recreation and an occasional holiday, she pursues her occupation from week-end to week-end. There is no hope for her ; she could not get out of her position in life if she were to try her hardest ; and she has no intention of trying. At last she aspires to marriage ; and, having provided a wedding-ring as an outfit, the two are united, to go on as before, only she now possesses the dignity of a married woman. Before their aristocratic helpers will do anything for the dwellings of these social outlaws, they should first do something to get them out of their swinish thoughts and ways. If a small property-owner does put his tenements into a fair state of repair, he finds the wood-work has been torn up for fuel, the gas-pipe wrenched off and sold to a marine-store dealer for a penny or so, which has been promptly expended in beer. Anything that can be made use of is right, and then, when the end of the week comes, the tenants have decamped and not lodged their new address with the postmaster-general's subordinates.

The school-board has wakened up to the fact that when a little child's stomach is empty, its brain is not very active, and its receptivity and power of remembrance limited. So now it is agitated to provide a meal once a day for these famished waifs,—a scheme at once opposed by the conservative element, who believes in letting well alone, and who regards the school board as the most objectionable and pernicious of all radical legislation. Ignorance and suffering are the lot of the poor,—are essentially linked to poverty in the divine scheme,—and a sense of impiety is associated in some minds with any suggestion to interfere. Yet this is the class who have begun to believe that the poor live amidst insanitary surroundings, and whose own fastidious sense of comfort recoils from the idea of a bed of a little straw and the covering their wet, soiled day-clothes. The squalor has been there all along, but it is only when the necessities of political faction cause the Marquis of Salisbury to sound his clarion notes on the matter that the aristocrat bestirs himself. When these philanthropists have succeeded in framing a feasible plan for the housing of these wretched folk, what are they going to do next ? To lodge them decently will not transform their natures. Paternal government may devote public money to building barracks for the post-office officials, and it may not be ill spent ; but that will do nothing for a class far below that of persons with regular weekly wages on which they can

exist with some approach to decency. Slums will be destroyed to make room for these new erections, and where shall the inhabitants of these slums turn their faces to find other refuges? Grant that even habitations can be provided for this class, who is to furnish them and make them habitable in the ordinary sense of the word? It is impossible to do anything until the lowest strata are taught some different ideals. To them the workhouse is a distinctly superior accommodation, but then their ways and instincts revolt at rules and regulations. They like to go their own way and follow their own sweet wills, just as other two-legged featherless beings do; and, as to being made happy and comfortable according to some other person's ideal, it reminds me of what one often sees,—viz., a parent trying his utmost to make his children happy according to his judgment and not theirs. His plan may be full of benevolence and kindness, but the enjoyment provided for them has no attractions for them to be interested therein, and the scheme fails. Their own way of enjoying themselves pleases them, if not approved of by him; what he approves of they do not care for. And when this ebullition of sentiment on the part of Dives towards Lazarus has expended itself in a royal commission, it will probably end in a realization that the Augean stable is too extensive to be swept by the broom of party feeling.

There is something about the Cockney waif which does impress one: his shifts are wonderful. Some time ago, a certain out-patient at St. Bartholomew's Hospital was noticed to be very assiduous in his application for cough linctus, a combination of treacle and morphia in vogue at most hospitals. So a watch was set, when it was discovered that this medicated treacle was used in the preparation of little pasties, which the enterprising confectioner vended on a barrow in a low neighborhood. Whether any harm had come to any of his customers from the morphia or not is unknown; probably the means of his little customers did not permit of their eating enough of them at once to do any mischief.

"The Bitter Cry of Outcast London" has been sent far and wide as a pamphlet; but philanthropy born of politics will do little for the Cockney proletariat.

J. MILNER FOTHERGILL.

A SUGGESTION FOR CHLOROFORM AND ETHER ADMINISTRATION.—To overcome a repugnance to the odor of chloroform in certain patients, Prof. Nussbaum, of Munich, has a few drops of oil of cloves placed on the towel before giving the anæsthetic. The addition of one part to six of cologne to ether makes it much more easy of administration in some cases.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, FEBRUARY 22, 1884.

The PRESIDENT, HENRY BEATES, JR., M.D., in the chair.

(Continued from page 517.)

DISCUSSION ON THE TREATMENT OF PUERPERAL CONVULSIONS.

DR. ALBERT H. SMITH, in opening the discussion, said: The case just presented illustrates a question in which we are all thoroughly interested. I agree with the reporter that an earlier resort to blood-letting might have prevented a considerable number of the convulsions.

As to the pathology of puerperal convulsions, while the theory that attributes it to a renal origin has been combated by many, yet I accept it as the only one consistent with my clinical observations and the facts as established by the best authorities. I divide cases into two general classes,—those that depend on a renal trouble, and those that are hysterical. The discrimination between the two is easy; the mental conditions in the intervals between the convulsions, and other evidences of hysteria, make the diagnosis of this variety not at all difficult.

The very striking analogy that exists between the convulsions of scarlatina and pregnancy fixes the pathology of puerperal convulsions: the marked fact that their violence is directly proportioned to the rapidity of development of the blood-deterioration is a strong index of this relationship. Where we find a slow development of kidney-trouble in scarlatina, we find convulsions rare; just so in pregnancy. Where, on the contrary, it is suddenly developed in pregnancy, we find convulsions most frequent and most severe. If a child catches cold by exposure during convalescence from scarlatina, the convulsions may be great. [As an illustration, Dr. Smith related a case of a patient in the seventh month of pregnancy, who took cold in returning to the city from the sea-shore. The face and whole body became œdematous, and thirty-six hours later she was attacked with uræmic convulsions. The urine had been carefully examined one week before and found entirely free from albumen.]

I regard itching as a constant attendant upon puerperal convulsions, and when noticed in a pregnant woman always feel anxious. [Dr. Walker having replied to a question of Dr. Smith's, that he had examined the urine within the week, Dr. Smith resumed.] I thoroughly approve of bleeding in these cases, as establishing a vicarious action for the kidneys. As to amount, I am not readily frightened: thirty-six ounces sounds large, but a woman in labor loses three times that

amount without inconvenience. I believe the treatment adopted in this case a proper one.

Dr. MONTGOMERY.—I have been very much interested in the clinical history so well presented by Dr. Walker. I should, however, suggest as a criticism that his first doses, as prescribed, were too small. Had he given half a grain of morphine, or not less than thirty grains each of chloral and bromide, he would most probably have escaped the subsequent convulsions. In a case seen by myself in consultation, in which the convulsions were very severe, and the patient was then anaesthetized, we gave half a grain of morphine hypodermically, and chloral, forty-five grains, per rectum. The os, but slightly open, was dilated with Barnes's dilators until forceps could be applied and the delivery completed. The patient, though several days semi-comatose, recovered without a recurrence of the convulsions.

The only patient whom I have bled was one who had convulsions during my term as resident of the Philadelphia Hospital. In a twin labor a convulsion occurred during the delivery of the second child. Chloroform was used, and the forceps applied. A second convulsion followed the delivery of the placenta. She was then bled,—some thirty-two ounces. No further convulsions ensued; but puerperal fever set in upon the third day, from which she died.

Morphine and chloral in full doses have seemed sufficient to control the convulsions.

That the convulsions are not due to organic degenerative changes in the kidney, or even congestion, is made evident by the fact that in fatal cases we most frequently find the kidneys anæmic or bloodless. Again, eclampsia is a rare occurrence in pregnant women who are suffering from Bright's disease.

A point mentioned in the paper refers to the slight œdema and intense itching. The latter symptom, without doubt, is due to the circulation in the blood of an excrementitious product which should have been eliminated by the kidneys. A careful examination of the secretion would more than likely have demonstrated renal insufficiency, particularly in the quantity of urea eliminated.

In regard to the anaesthetic, I should like to call attention to the bromide of ethyl. It can be given at the inception of a pain, and acts sufficiently to decrease the discomfort without lessening the voluntary contractions. Under its uses one can dilate the vaginal orifice and the os, or apply the forceps, without pain. Its great advantages as an anaesthetic in labor are its rapid action and equally evanescent effect, and that it does not decrease the voluntary or involuntary contractions, thus promoting the danger of hemorrhage, as is the result of the more continuous anaesthetics, ether and chloroform.

Dr. LONGAKER.—I consider chloral, bromides, and morphia generally sufficient in

these cases. In a case seen one year ago I tried chloral by itself in even larger doses than mentioned here,—a primipara in the eighth month of gestation. After the second convulsion coma continued, and phlebotomy was performed without marked effect. Eighteen hours after the convulsions began, chloral by rectum was resorted to, and one and a half drachms given in three hours. At this time the patient had had fourteen severe convulsions. Labor did not set in until two days after the cessation of convulsions, when complete consciousness had returned. She was delivered of a living foetus of eight months, after a natural and easy labor. Both mother and child have since continued to do well. All traces of albumen disappeared from the urine in about a week. I think in this case chloral had a fair trial and most opportune result.

Dr. CHARLES P. TURNER.—In regard to the intense itching mentioned by the reader of the paper, I am satisfied that I saved a lady from puerperal convulsions by attention to this point. The itching was intense, and unrelieved by anodynes. Albumen was found to be present in the urine. As it was thought that she would succumb to the itching, premature labor was induced between the seventh and eighth months, with a favorable result. All symptoms subsided immediately. I think premature delivery is worthy of consideration in such cases.

Dr. Turner further cited cases of acute Bright's disease quickly developed after delivery as upholding Dr. Smith's opinions as to the etiological value of a depraved kidney-tissue in the production of puerperal convulsions.

Dr. ANDERS.—I recently saw in the *London Lancet* a new theory of the cause of puerperal convulsions. The womb in such cases was said to be prevented from expanding upwards, and growth was necessarily backwards against the kidneys. Between the two theories it would seem that the balance is in favor of the renal.

Dr. McDOWELL.—It is well known that a circulation filled with serum will press upon the brain unduly. There certainly is pressure in such cases that is relieved by venesection. I never dilate, as I find venesection a dilator. Some time since, I had occasion to bleed a woman for brain-pressure in labor. The os was small and firmly contracted. After bleeding, I examined the vagina and found the child about to be delivered. After bleeding I direct free purgatives, with one-twenty-fifth of a grain of morphia, and a diet of skim-milk.

After blood-letting and free purgation no cases should be lost.

Dr. OTT.—Of the cases seen by me I have noticed that all complain of headache. I always expect convulsions when there is headache.

Dr. MASSEY asked the reader of the paper if pruritus in the pregnant condition was generally considered so grave a symptom as the history of this case would seem to indicate.

THE PRESIDENT.—That true puerperal eclampsia is of renal origin I think cannot be gainsaid, but that so much of import is attached to the quantity of albumen eliminated, and this proportion being made a basis of diagnostic value in estimating the intensity or degree of uræmic toxæmia, is, I believe, fallacious. A series of quantitative analyses instituted with a view of determining whether or not a direct relationship existed between the elimination of urea and that of albumen, while as yet too few to contribute much of definite knowledge, tend to confirm the belief that no direct relationship as above mentioned does exist. One specimen indicated a daily elimination of 300 grains of urea and 183 grains of albumen; another, 278 grains urea, 90 albumen; a third, 97 grains urea and 140 grains albumen; another, 180 grains albumen, 290 of urea. Of this series the matters vomited, which were largely liquid saliva and alvine dejections, were not analyzed, but the urine only. It is evident, therefore, that it is erroneous to form an opinion concerning the intensity of the *uræmia* from the quantity of albuminuria. That *uræmia* only is the etiological factor I doubt, and regard an accumulation of excrementitious matters in the blood as the cause of this affection. The kidneys, like other glands, the liver being a conspicuous analogue, are subject to influences, psychical, etc., that result in cessation of their functions, and the anuria so frequently known to precede puerperal eclampsia, notwithstanding absence of organic disease, permits with no great effort the belief that accumulation of by-products in the system constitutes an active cause.

The turgescence of the vessels, cerebral tension, excited nerve-centres, and prompt relief following free bleeding indicate and confirm the belief that in phlebotomy we possess a therapeutic means that will serve as a prophylactic before the eclamptic phenomenon has culminated, and a sure relief when the convulsion has occurred.

Dr. WALKER, in closing the discussion, said he was very glad to have presented a case that had proved so interesting to those present. There was no cutaneous evidence of itching, and I think it undoubtedly due to retention of excrementitious matters in the blood. It is the first time that it has ever occurred to me, and should have suggested an analysis for urea, as Dr. Montgomery has suggested.

As regards pathology, I do not believe that puerperal convulsions have a pathology, but that each case has an individual position and should be considered on its own merits. Sometimes they are merely reflex, due to an excessive convulsibility. The urine first drawn had only a trace of albumen. Dr.

Smith's comparison was a just one. Before there were any convulsions in his case there were other evidences of renal trouble. In mine there were none.

In regard to large doses, I think that nothing more can be done than to put the patient into the chloral sleep, which was done. She was a near neighbor, and the doses were designed to be largely under my own supervision.

Bleeding is mainly useful as a sedative, not through exhaustion or the removal of effete materials.

PHILADELPHIA NEUROLOGICAL SOCIETY.

THE first stated meeting was held Monday evening, February 25, 1884, the Vice-President, Dr. CHARLES K. MILLS, in the chair.

Dr. MILLS read a paper on

THE MCGINNIS CASE.

A history of the case, including an account of the crime, and a discussion of the formation, proceedings, and reports of the commission to inquire into the mental state of McGinnis, was given.

The facts indicating the insanity of McGinnis were summarized by Dr. Mills, in the course of his paper, as follows: a bad family history; evidences of the monomaniacal character, as shown by a study of his life and present condition; the existence of a delusional state, and even of special delusions of a depressive and persecutory type; the presence of hallucinations of hearing and sight, the former being connected largely with persecutive ideas; some manifestations of religious monomania; a history of alcoholism, and the fact that his chief delusion, that of marital infidelity, was one often found in chronic alcoholic insanity.

Dr. LAMBERT OTT reported a case of unilateral spasm, hemiplegia, and aphasia, following measles, in a child two years and four months old. (See page 534.)

The discussion on Dr. Ott's paper was opened by Dr. FRANCIS DERCUM, who said he was inclined to regard the interesting case reported by Dr. Ott as more likely to be one of hemorrhage than of embolism. It is well known that the miliary aneurisms described by Charcot and others occur sometimes in the very young; therefore one of the conditions which lead to hemorrhage may be present in infancy. The absence of valvular disease of the heart was also against the idea of embolism.

Dr. Dercum thought that the symptoms presented by the case indicated a lesion of the internal capsule and basal ganglia, rather than of the convolutions. He referred to the more frequent occurrence of hemorrhage in

this region, and also to the wide extent of cortex that would have been required to be involved in order to explain the phenomena.

Dr. CHARLES K. MILLS agreed with Dr. Dercum that, from the history of the case, the absence of recognized heart-lesions, and the age of the patient, the case was probably one of hemorrhage. He believed, however, that some of the facts indicated a cortical lesion. One of these was the existence of choreic movements on the side opposite that which was paralyzed.

According to Duret, when irritative lesions of the cortex occur, they not only produce spasm on the opposite side of the body, but also may cause contraction or spasm on the same side, the result being brought about through irritation of the sensory nerves of the dura mater, which irritation is conveyed to the bulbo-medullary centres.

Dr. Mills referred to the completeness of the paralysis, as a matter of great interest in connection with the views of Broadbent as to the communication by well-worn commissural channels of those parts of the central nervous system which preside over movements of the two sides of the body which are associated.

Dr. JAMES HENDRIE LLOYD referred to the remarks which Dr. Ott had made about the angular gyrus not having been involved, and said he was not aware that any well-reported cases of embolism affecting the angular gyrus and causing blindness had been published.

Dr. DERCUM said that the occurrence of choreic movement on the side of the lesion could be as well explained by the transmission of irritation by means of the commissural channels of the brain, as by the views of Duret.

Dr. OTT closed the discussion, and said in favor of embolism is the sudden appearance of the attack, and an array of symptoms which usually follow an embolus in the left middle cerebral artery. In favor of cerebral hemorrhage is the disorganized condition of the blood as a resultant of measles, predisposing to such an occurrence.

On the conclusion of the discussion of Dr. Ott's paper, Dr. CHARLES K. MILLS read a

NOTE ON THE USE OF NERVE-PRESSURE FOR THE RELIEF OF HYSTERICAL CONTRACTURE.

In three cases Dr. Mills had resorted to strong pressure, applied, by means of the thumb or fingers, to the trunk of the nerve supplying the muscles affected by the spasm in contracture; in a case of hysterical spasmodic torticollis, and in one of hysterical contracture of the wrist and hand, the condition passed away, and remained relieved; in a case of long-standing contracture at the knees under the effects of pressure on the sciatics, the spasm disappeared, but recurred. The procedure was simple, and had value

both as a means of diagnosis and treatment. Whether the effect was produced by mental effect, by causing a temporary paresis, or by the pain, he was not prepared to say.

Dr. WHARTON SINKLER spoke of having used the method unsuccessfully in a case of facial spasm, which was not, however, hysterical in character.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 3, 1884, H. T. HANKS, M.D., Vice-President, in the chair.

THE REMOVAL OF THE AFTER-BIRTH

was the title of the scientific paper of the evening, by Dr. H. J. GARRIGUES. The author practised Cr  d  's method, described as many as thirty years ago. When he became connected with the Maternity Hospital, this method was introduced into his wards at that institution. He gave the results of four hundred and eight cases treated in one year. Two of the patients aborted at the fifth and sixth months respectively, and the placenta was only removed piecemeal. In only six of the number did Cr  d  's method fail. In six the membranes had to be removed after separation of the placenta. In four of the cases there existed abnormally intimate connections between the placenta and uterus. In one of the six cases in which a part of the membranes was retained, the entire hand was introduced into the uterus in order to remove it; in the other five only the index and middle fingers were employed for this purpose. The uterus was afterwards washed out with the bichloride solution, one part to two thousand of water. As he had seen serious post-partum hemorrhage arise from leaving the membranes, he made it a rule always to remove them if retained beyond the usual time.

Cr  d  's method only increases the power of normal contraction of the uterus, by which the placenta is expelled; it closely imitates the natural contraction and movement of the uterus, shortens the third stage of labor, aids muscular contraction, and thus counteracts hemorrhage. There was post-partum hemorrhage in only two of the four hundred and eight cases, and in those it commenced directly after birth of the child, and was not due to attempts to deliver the placenta. It was important that the uterus be seized from all sides over the largest possible space, and that downward pressure be not practised except after the womb has contracted. In the majority of cases the after-birth was not thrown entirely outside of the vulva, but when it was not it could be removed without introducing the finger into the vagina.

The distinguishing features he claimed for Cr  d  's method over others were:

1. That it was used in all cases.

2. That the uterus was grasped from all sides with both hands.

3. That the placenta was squeezed out by the outside pressure during a uterine contraction.

4. That the cord and placenta were never touched, except in rare cases in which the placenta was really adherent and had to be pulled off from the uterine wall.

5. That the fingers were not introduced into the genital canal after delivery, when the danger of infection was much greater than before the passage of the child.

The advantages of this method were:

1. The certitude with which the desired end was accomplished.

2. The exact imitation of the natural processes.

3. The prevention of hemorrhage.

4. The prevention of hour-glass contraction.

5. The prevention of inversion.

6. The prevention of avulsion of the cord or of the uterus itself.

7. The prevention of infection.

The method of pulling upon the cord was attended by corresponding disadvantages. The method now practised by some in Germany, of non-interference, had many disadvantages and no redeeming qualities. It was not natural that the placenta remain in the genital canal for some hours after detachment, and if the patient were in the savage state she probably would get up soon after the birth of the child, and the after-birth, having become detached, would fall out of its own weight. On the contrary, as the patient in civilized life usually lies in bed after delivery, it might remain in the canal for hours before it came away.

DISCUSSION.

Dr. A. S. HUNTER endorsed the conclusions which Dr. Garrigues had arrived at, and would only say that he commenced Cr  d  's method just before the delivery of the child, and when followed up in this manner the uterus firmly contracted upon the placenta, and the period between the delivery of the child and of the after-birth was shortened.

Dr. A. HADDEN made gentle traction upon the cord and made pressure over the site of the placenta, and he did not believe that slight traction on the cord would induce inversion. He had attended over two thousand cases of midwifery, and had not been able to trace any evil result to this practice; on the contrary, his method had been rewarded with very good results. He took great pains to have the uterus contract into a globular form, and he remained with the patient some time after delivery of the placenta.

Dr. M. PUTNAM JACOBI thought Cr  d  's method superior to any other. She thought nature began to prepare for contraction of the uterus towards term by closing up the veins by thrombi and clots, and sending a greater

amount of arterial blood, by which alone muscular contraction was favored. Cr  d  's method, by diminishing the uterine cavity, favored this occlusion of the veins. This was a theoretical idea which had come to mind while the author was reading his paper. In view of the exhaustive remarks which had already been made regarding Cr  d  's method, she could add nothing practical.

Dr. P. F. MUND   practised Cr  d  's method, and it proved of the greatest service, but he thought we should take care not to follow it up too vigorously, and cause too rapid expulsion of the placenta, as it would be likely to be followed by uterine inertia. He had had such an experience, and was convinced of the importance of allowing nature to do her work somewhat slowly. When the fundus was found to have descended to about halfway between the pubis and umbilicus, and to have assumed a globular shape, we could feel pretty certain that the placenta was detached, and he did not then hesitate to introduce the hand, properly disinfected, and withdraw it from the cervical canal if it had not been farther expelled. He had seen the condition called encystment of the placenta, in which it had become detached and was retained within the contracted cervix, necessitating the introduction of the finger for its delivery. It was criminal not to remove retained membranes. He did not at all believe in the let-alone method. He also believed that gentle traction might be made upon the cord with safety.

Dr. FRUITNIGHT thought with regard to the let-alone policy that the placenta should be looked upon as a foreign body, and he could not conceive how any reasonable obstetrician could leave it in the genital canal longer than was absolutely necessary. In one case in which he had made, as he thought, gentle traction upon the cord, the placenta became detached in the centre while the margins remained attached, and it resulted in troublesome concealed hemorrhage. In a few cases Cr  d  's method might not be applicable, but they could be judged of when seen.

Dr. I. E. TAYLOR said that everything connected with childbirth was physiological. The delivery of the placenta was a physiological process, not pathological, and we should not interfere with nature's methods. He had not introduced the hand into the uterus to deliver the placenta more than six times, he believed, during his entire practice. The direction of the uterus varied after the birth of the child according to the attachment of the placenta, and he was enabled, by making slight traction upon the cord, to tell whether it was attached posteriorly, anteriorly, or to the fundus. He thought it wrong to make forced expression with the supposition that the placenta should be delivered within five or ten minutes. Such was not according to the law of nature. She waited twenty minutes,



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or even an hour. The uterus was fatigued in giving birth to the child, and needed immediate rest before being called upon again to contract and expel the after-birth. He had seen a case in which the placenta was attached at the entrance to the Fallopian tube, where Cr  d  s method, he thought, would have failed. He imitated the physiological process by making gentle traction upon the cord, and thus stimulating the uterus to expel the membranes.

Dr. RAMSDELL had once been called to see a patient whose physician had let the placenta remain for forty-eight hours. There was found to be hour-glass contraction. Septic  mia developed, and the patient died. He was in the habit of practising gentle traction on the cord and friction over the uterus. Out of seven hundred cases of confinement in his practice only one patient died, and in that instance death was due to vaginal injections, used by the nurse without his instructions. He had been obliged in two or three cases to introduce the hand and tear away the placenta, as one would tear the kidney from its fatty envelope in the hog. Usually the placenta came away in his practice within twenty minutes after the birth of the child; he did not think more than thirty minutes ever elapsed.

Dr. SELL thought we should not restrict ourselves to any absolute rule in the delivery of the placenta. In general he had found the method described by Denham, before Cr  d  , of greatest benefit. Formerly, under the teachings of Dr. Taylor, he waited half an hour to three-quarters of an hour. At present the placenta was usually delivered within from fifteen to twenty minutes. It should be strongly impressed upon the young physician that he should not be in too great a hurry to deliver the placenta.

Dr. GARRIGUES, in closing the discussion, said he thought we would all agree that it was desirable as far as possible to imitate nature's own methods, but as to what might constitute such an imitation we might not agree upon. For instance, he thought it certainly very unnatural to allow, after the method of those who would make no interference, the placenta to remain in the genital canal some hours after its detachment. In his opinion, also, it was not natural to make traction upon the cord, and, unless for unusual conditions, he did not touch it at all. The case of placental attachment around the entrance to the Fallopian tube, mentioned by Dr. Taylor, was probably one in which there had been tubal pregnancy and the ovum had descended to the uterine cavity. Such cases were very rare, and had no practical bearing upon Cr  d  s method. He would not feel justified in introducing the hand into the uterus for delivery of the after-birth before the lapse of an hour and a half; but, on the other hand, he did not think it right to leave the placenta until it should become decomposed.

GLEANINGS FROM EXCHANGES.

OVARIOTOMY.—In a lecture on the operation of ovariectomy, delivered at the Harvard Medical School (*Boston Medical and Surgical Journal*, No. 15), Dr. John Homans stated that he had opened the abdomen for various purposes two hundred and three times. He further says, "I have done the operation of ovariectomy one hundred and fifty-nine times. My first five cases of ovariectomy were performed without any antiseptic precautions whatever, and all died. In the next one hundred cases I used antiseptic agencies, including spray. Of these thirteen died and eighty-seven recovered. Since then I have operated for ovariectomy fifty-four times, with four deaths. My last thirty cases have all recovered. I ought, in this connection, to say that I have never declined to operate but once, the patient in that case having been already tapped to the amount of two thousand two hundred and seventy pounds in five years. I have operated upon all the other cases that have come to me, and although my late continued success is doubtless owing to good fortune, I feel that I can now perhaps do the operation better than I could at first." With regard to the spray he says, "I always use the spray, and need a steam atomizer. I do not believe that the spray is absolutely essential, but I have had very good success with it, and have never known that it has done any harm." He uses ether as an an  sthetic, and prefers to have seven assistants, whose duties are carefully assigned before the operation.

The steps of the operation are these: (1.) Make the incision down to the rectus muscle. (2.) Stop all bleeding in the abdominal walls. (3.) Open the abdomen and explore for adhesions. (4.) Tap the cyst as high as possible. (5.) Detach the adhesions. (6.) Draw out the cyst and clamp the pedicle with Dawson's clamp, burn it off with the cautery, tie it, and remove the clamp. (7.) Examine the other ovary, and remove it if necessary. (8.) Thoroughly sponge out the abdominal cavity. (9.) Close the wound. (10.) Apply the dressings, and put the patient in bed. He ties the pedicle with carbolized silk ligature.

After the operation, the patient should be left alone with her nurse, and should be allowed to sleep as long as she will. Sometimes there is vomiting, and sometimes not, but nothing need be done for it. As a general rule, the temperature is not much affected; it rarely rises above 100   F. during the whole convalescence. An opiate is generally required during the first twelve hours after the operation, and sometimes never again. He generally gives one-sixth grain of morphia, or its equivalent in solution by means of Bigelow's opiate enema syringe, which holds a drachm of fluid, and was figured in the *Bos-*

ton Medical and Surgical Journal, vol. xcvi. (1877), p. 360. The cardinal principle in taking care of a patient after ovariectomy is to give all opiates and stimulants *by the rectum* until flatus passes the bowels, or until all symptoms of nausea or vomiting have been absent for many hours.

DEVELOPMENT OF APOMORPHINE IN OLD MORPHINE SOLUTIONS.—Dr. C. E. Jennings, in the *Lancet*, calls attention to the importance of preparing extemporaneously solutions of the alkaloids for hypodermic medication. He shows that in addition to the loss of morphine in the solution from the development of the penicillium, there is also a certain amount of apomorphine formed. This may account for the violent vomiting sometimes following hypodermic injection of morphine. Since the syringe is so liable to get out of order from want of use, he recommends the substitution of a small graduated pipette, which operates without a piston, the fluid being discharged by blowing into the pipette through a rubber tube.

SULPHATE OF COPPER AS A DISINFECTANT.—Dr. Charpentier has used a one-per-cent. solution of copper sulphate in obstetrical practice as a disinfectant, and pronounces it an efficient and cheap substitute for carbolic acid or corrosive sublimate.

MISCELLANY.

A BILL TO REGULATE THE MEDICAL SERVICE OF STEAM-SHIPS AND OTHER PASSENGER-CARRYING VESSELS.—At the last meeting of the American Medical Association a committee was appointed, consisting of Dr. A. Nelson Bell, of New York, J. N. Quinby, of New Jersey, Henry I. March, of Massachusetts, Henry and Smith, of Pennsylvania, and Albert L. Gihon, U. S. Navy, to prepare a bill to present before Congress to regulate the medical service of passenger vessels.

The following is the full text of the bill, which was offered by Mr. Slocum in the House of Representatives, March 24, 1884. It has been read twice, and referred to the Committee on Commerce, and ordered to be printed:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in every steam-ship or other vessel carrying or bringing passengers other than cabin passengers to the United States there shall be properly constructed and separated from other parts of the vessel two compartments or spaces to be used exclusively as hospitals, the one for the men and the other for the women, such hospitals to be located on the main deck or the deck immediately below it, and never on any lower deck, and to be in no case less in size

than the proportion of eighteen clear superficial square feet for every fifty such passengers and crew; and such hospitals shall be supplied with proper beds, bedding, and utensils, and kept so supplied throughout the voyage.

"SEC. 2. That every steam-ship or other vessel carrying or bringing passengers other than cabin passengers exceeding, with the crew, fifty in number, and less than six hundred, shall be required to carry a duly qualified, competent, and regularly licensed surgeon or medical practitioner, and where the number of such passengers and crew is over six hundred, a junior or assistant surgeon or medical practitioner in addition, which surgeons or medical practitioners, junior and senior, shall be rated as such on the ship's articles, and shall be provided with surgical instruments, medical comforts, and medicines proper and necessary for diseases and injuries incident to a sea-voyage, and for the proper medical treatment of such passengers and crew during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeons or medical practitioners shall be promptly given without fee in every case of sickness, disease, or accident to any of the passengers or crew, or to any infant or young child of any such passenger who may require their services; and the medical officer, where there is but one, and the senior where there are two, shall also be required to perform the duties of sanitary officers, to make daily inspections of all inhabitable portions of the vessel, and daily reports thereon in writing to the master of the steam-ship or passenger vessel, together with such suggestions and recommendations as in his judgment may be necessary to the preservation of health on board. He shall also exercise constant vigilance in regard to the condition of the provisions and water, and promptly report to the master anything which may appear to him to be deleterious to the health of any person on board.

"SEC. 3. That for the proper exercise of these functions, and the maintenance of the respect to which such medical and sanitary officers are entitled, they shall be provided with a steward or apothecary competent to dispense medicines under their direction and for their special service; and their tenure of office, remuneration, and right to suitable quarters, subsistence, and attendance, shall be upon the same basis as and co-ordinate with the purser, first officer, and chief engineer of the vessel on which they serve.

"SEC. 4. That for a violation of either of these provisions, or the disregard of the recommendations made in writing by the medical and sanitary officers as herein provided, the company to which the steam-ship or other passenger vessel belongs shall be liable to a

penalty not exceeding two hundred and fifty dollars in every case.

"SEC. 5. That this act shall take effect and be in force from and after its passage.

DR. MORRIS LONGSTRETH, of Philadelphia, has just completed a course of six lectures on the "Germ Theory of Disease," in Boston. They were delivered by invitation of the directors of the Lowell Institute, in Huntingdon Hall. The position taken by the lecturer was one in antagonism to some of the recent views upon the etiology of disease which have been, perhaps too hastily, adopted. Many of the points advanced by the lecturer were original, and the matter was striking, new, and interesting, and the course attracted much attention and was well attended.

WE notice that the "Quarterly Epitome of American Practical Medicine and Surgery, collateral to Braithwaite's Retrospect," begins its fifth volume with the March issue under new editorial management. Its editor, Wesley M. Carpenter, M.D., of New York, is an experienced and successful medical journalist, who, in our opinion, combines good judgment and technical knowledge with professional accomplishments in just the proper proportions to qualify him for the task he has undertaken.

ALEXANDER WOOD, M.D., of Edinburgh, Scotland, died February 26. He was a distinguished physician and an able writer. He was the originator of hypodermic medication by means of the syringe and hollow needle. His article on a "New Method of Treating Neuralgias by Subcutaneous Injection" appeared in 1855.

PROF. ALFRED STILLÉ, after twenty years' service as a teacher, delivered his valedictory address, to his class on April 10, his resignation, as announced at the beginning of the term, taking effect at the close of the session. He was received with great applause by the students, and his earnest utterances were listened to with marked attention and respect.

THE EGYPTIAN GOVERNMENT has abrogated the decree instituting a Council of Health, and has established a directorship of sanitary services attached to the Ministry of the Interior, in whose hands such services shall be centralized.

THE PHILADELPHIA SCHOOL OF ANATOMY is located now at 100 North Tenth Street, and is under the charge of Dr. Louis W. Steinbach, M.D., Lecturer on Anatomy and Operative Surgery.

THE PENNSYLVANIA SCHOOL OF ANATOMY AND SURGERY, George McClellan, M.D., lecturer, is at the corner of Tenth and Medical Streets.

THE spring course of lectures at the Jefferson College began April 14.

NOTES AND QUERIES.

A PERILOUS TOY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES :

DEAR SIR,—Under the title of "serpents' eggs" are offered for sale, in the toy-shops here, little pyramidal, gray-colored pastils, about one-eighth of an inch in diameter at the base and one-quarter of an inch high. Their average weight is 1.262 grains. They are used as follows. The pastil is placed on a plate or a piece of glass, and the flame of a match is held in contact with it. It begins to coil and wriggle like a snake, and looks as if it were alive, lengthening out to several inches. During the process of heating, the odor of cyanogen is evolved, and a brownish-gray serpentine form remains. This is, doubtless, an elegant amusement for scientific priests, ambitious schoolmasters, illiterate millionaires, philoprogenitive old maids, and other weak-minded persons. I have examined these pastils, and find that they consist almost entirely of *sulpho-cyanide of mercury*, containing traces of other metals, probably existing as impurities in the original mercury. The serpentine form above mentioned also contains mercury. In proof of the presence of mercury I send you a piece of copper-foil with a coating of that metal derived from a minute fragment from one of these pastils. Now, suppose that a child should eat or swallow two or three of these pastils (an event quite likely to happen), it would probably be dead in fifteen minutes. The danger, however, is not so much from the mercury as from the sulpho-cyanogen, which last is a very potent poison. As regards the mercury itself, I rather think that the majority of children born hereabouts would be positively benefited by the exhibition of small doses of that metal as soon as they are born—if not sooner. These "serpents' eggs" (or "sooner turds," as they are somewhat vulgarly styled here) might be used with murderous intent, and they are very easily procured at the toy-shops. It strikes me that when powerful poisons such as this sulpho-cyanide of mercury are sold as toys, something energetic ought to be done. There are one and three-tenths of a grain of sulpho-cyanide in each of these pastils. I am, sir,

Yours respectfully,
GEORGE HAY, M.D.,
Chemist.

ANALYTICAL LABORATORY,
198 PENN AVENUE, PITTSBURGH, PA.,
April 7, 1884.

INTERNATIONAL HEALTH EXHIBITION IN LONDON.

A somewhat novel feature in connection with the exhibition this year will be the establishment of a library and reading-room, a home for which the executive council have assigned in a large double room in the Albert Hall, overlooking the conservatory. Steps have been taken to secure a representative collection of works on vital statistics, of reports and regulations relating to public health, of regulations with reference to injurious trades, and of works thereon, of reports, statistics, and other works on the science of education. Foreign powers have been invited to lend their co-operation in this effort to create an international library of works of reference bearing on the two divisions of the exhibition, and several responses have already been received. India and the Colonies have also been asked to contribute towards the same end. Publishers and authors have likewise been invited to forward copies of their works. In addition to the library of reference, there will be a reading-room, to which the current numbers of periodical publications of a sanitary or educational character will be admitted. All books and periodicals sent to the library and reading-room will, under certain regulations, be arranged for the use of visitors, and not merely for exhibition. The books will be submitted to the jurors, and a full catalogue will be issued. All parcels for the library and reading-room should be addressed, carriage paid, to the Secretary of the Library Sub-Committee, Royal Albert Hall, London, S.W.

April 2, 1884.

THE AMERICAN MEDICAL ASSOCIATION.

In the Section of Practice of Medicine several subjects of great interest will be discussed. Prof. William Pepper, of Pennsylvania, will open the discussion on "The Clinical Study of Epilepsy." Dr. Roberts Bartholow, Pa.; Dr. Horatio Wood, Pa.; Dr. J. S. Jewell, Ill.; Dr. James T. Whitaker, Ohio; Dr. O. F. Hooper, Ark.; Dr. Eugene Grissom, N.C.; Dr. James E. Reeves, W. Va.; Dr. T. B. Lester, Kansas; Dr. Joseph P. Logan, Ga.; Dr. W. K. Bowling, Tenn.; Dr. John S. Moore, Mo.; Dr. James F. Hibbard, Ind.; Dr. J. J. Caldwell, Md.; Dr. John A. Murphy, Ohio; and Dr. A. P. Grinnell, Vt., are also expected to take part.

A discussion on the "Clinical Study of the Heart-Sounds" will be opened by Prof. Austin Flint, Sr., of New York. Dr. Edward Janeway, N.Y.; Dr. William Pepper, Pa.; Dr. Frederick C. Shattuck, Mass.; Dr. John H. Bemiss, La.; Dr. James Wilson, Pa.; Dr. Richard McSherry, Md.; Dr. James R. Leaming, N.Y.; Dr. John S. Lynch, Md.; and Dr. A. B. Palmer, Mich., are expected to participate.

A discussion on "Tuberculosis" will be opened by Dr. Henry F. Formad, of Pennsylvania. Dr. Austin Flint, Sr., N.Y.; Dr. William Welch, N.Y.; Dr. N. S. Davis, Ill.; Dr. George M. Sternberg, U.S.A.; Dr. R. S. Fitz, Mass.; Dr. Henry O. Marcy, Mass.; Dr. James Tyson, Pa.; Dr. Edward Janeway, N.Y.; Dr. Charles Dennison, Col.; Dr. Henry F. Campbell, Ga.; Dr. W. T. Belfield, Ill.; Dr. Alonzo Garcelon, Me.; Dr. E. O. Shakespeare, Pa.; Dr. G. C. Smythe, Ind.; Dr. Harold C. Ernst, Mass.; Dr. W. E. Geddings, S.C.; Dr. Traill Green, Pa.; and Dr. John Lynch, Md., will join in the discussion.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

The Annual Meeting of the Association of American Medical Editors will be held in Washington, May 5, at 8 P.M., in Medical Hall, southeast corner of Sixth and F Streets.

The Annual Address will be delivered by President Lear-tus Connor, M.D., on "The American Medical Journal of the Future, as Indicated by the History of American Medical Journals in the Past."

Dr. N. S. Davis will open the discussion on "How far can Legislation Aid in Elevating the Standard of Medical Education in this Country?" in which Drs. A. B. Palmer, Henry O. Marcy, L. S. McMurry, C. H. Hughes, Frank Woodbury, William Brodie, A. N. Bell, William B. Atkinson, W. C. Wile, W. R. D. Blackwood, Henry Leffmann, and Deering J. Roberts will take part.

All members of the profession, especially journalists and authors, are invited to be present and take part in the meeting.

JOHN V. SHOEMAKER, M.D.,

1031 Walnut Street, Philadelphia.

Secretary.

MODIFICATION OF GMELIN'S TEST FOR ALBUMEN IN THE URINE.

MR. EDITOR:

MY DEAR DOCTOR,—Some weeks ago you published a suggestion from me about Heller's test for albumen. I have received several letters asking me to state how I proceeded to add the cold urine to the acid while boiling. If my note bears this meaning on its face, will you kindly correct it by stating that I heat the acid to the boiling-point and then overlay with the suspected urine? The heating of the acid is to hold the urates in solution, which are precipitated in cold solutions, as stated.

Respectfully yours,

H. C. BOENNING.

528 FRANKLIN STREET.

OBITUARY NOTICE.

ARTHUR M. WILSON, M.D., Ph.D.

DR. ARTHUR M. WILSON, son of Dr. Benjamin B. Wilson, died at his father's residence, 1903 Chestnut Street, in this city, March 31, in the 22d year of his age.

Dr. Wilson was graduated from the University of Pennsylvania in 1882, taking the degree of Doctor of Philosophy in June of the same year.

He immediately entered upon the active duties of his profession, establishing himself in the home in which he grew up to manhood. So favorably was he known and regarded that his business became, at the outset, extensive as well as lucrative, placing him at once in a position that young physicians are usually obliged to devote years to attain.

But his health, which was never robust, had doubtless been impaired by too continued and persistent study during the period of his pupillage, and was now found unequal to the demands upon it. The inevitable exposure and fatigues of a physician's life developed in his case a constantly recurring tendency to lung-congestions, and he found himself unwillingly compelled to abandon his bright professional prospects and seek a hoped-for recovery in rest and the care of his family.

For a time the efforts of devoted relatives gave hopes of at least a partial restoration; but the past winter has been an especially trying one to invalids, and he passed away peacefully and happily, in the earliest bright days of spring.

Dr. Wilson's temperament was peculiarly amiable and kind, yet dignified and self-asserting. He was enthusiastic in his profession, and was possessed of perception and judgment remarkable in one so young.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 30, 1884, TO APRIL 12, 1884.

BAILY, ELISHA I., COLONEL AND SURGEON.—Ordered to report to the Commanding General, Division of the Pacific, for duty as Medical Director of that Division and of the Department of California. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

SUTHERLAND, CHARLES, COLONEL AND SURGEON.—To be relieved from duty in Division of the Pacific, and to report to the Commanding General, Division of the Atlantic, for duty as Medical Director of that Division and of the Department of the East. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

SMITH, JOSEPH R., MAJOR AND SURGEON.—Directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in Washington, D. C., on the 6th of May, 1884, and, on the adjournment of the Association, to return to his proper station (San Antonio, Texas). Paragraph 7, S. O. 81, A. G. O., April 8, 1884.

WOODHULL, ALFRED A., MAJOR AND SURGEON.—Granted leave of absence for twenty-two days, to take effect about April 6, 1884. Paragraph 13, S. O. 72, A. G. O., March 28, 1884.

STERNBERG, GEORGE M., MAJOR AND SURGEON.—Ordered to be relieved from duty in Department of California, and to report to Commanding General, Department of the East, for assignment to duty.

MOSELEY, EDWARD B., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to be relieved from duty in the Department of the East, and to report to the Commanding General, Department of the Columbia, for assignment to duty. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

BAILY, JOSEPH C., MAJOR AND SURGEON.—Leave of absence extended three months. Paragraph 8, S. O. 83, A. G. O., April 10, 1884.

WILCOX, TIMOTHY E., CAPTAIN AND ASSISTANT SURGEON.—Ordered to be relieved from duty in Department of the Columbia, and to report to the Commanding General, Department of the East, for assignment to duty. Paragraph 4, S. O. 78, A. G. O., April 4, 1884.

WHITE, ROBERT H., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty at U. S. Military Academy, West Point, N.Y., August 28, 1884. Paragraph 7, S. O. 74, A. G. O., March 31, 1884.

MEARNS, EDGAR A., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Verde, Arizona Territory. Paragraph 1, S. O. 22, Headquarters Department of Arizona, March 19, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM MARCH 31 TO APRIL 12, 1884.

Medical Director P. S. WALES, granted one year's leave of absence from March 28, with permission to leave the United States.

Medical Inspector N. L. BATES, ordered to Washington, to attend sick officers.

Medical Inspector M. BRADLEY, ordered to continue at League Island Navy-Yard.

Assistant-Surgeon H. W. WHITAKER, ordered to Naval Rendezvous at Philadelphia, Pa.

Surgeon-General F. M. GUNNELL, appointed Chief of Bureau of Medicine and Surgery and Surgeon-General of the Navy, with the relative rank of Commodore, from March 27.

P. A. Surgeon C. W. RUSH, ordered to Naval Academy.

Surgeon D. McMURTRIE, detached from Naval Rendezvous, Philadelphia, and to await orders for duty at Navy-Yard, Washington, D.C.

Medical Inspector H. C. NELSON, ordered before Retiring Board.

Medical Inspector A. C. GORGAS, to be Medical Director from March 4, on the active list.

P. A. Surgeon S. W. BATTLE, ordered before Retiring Board.

Surgeon H. M. WELLS, detached from Naval Hospital, New York, to report at Bureau for special duty.

P. A. Surgeon C. T. HIBBET, placed on waiting orders.

Surgeon H. STEWART, placed on Retired List from April 10.

PHILADELPHIA, MAY 3, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE ON CASES OF DISEASES OF WOMEN.

BY JAMES B. HUNTER, M.D.,

Surgeon to the Women's Hospital, and Professor of Gynecology in the New York Polyclinic.

DERMOID CYST OF OVARY.

HERE is the left ovary, gentlemen, from the case described to you previously, which some of you saw me operate upon on February 12. The specimen



(as shown in the above figure) is one of dermoid degeneration of the ovary, and differs in some respects from any I have ever seen. The ovary is not much increased in size, but about half its substance consists of sebaceous material. It is an incipient dermoid cyst. The patient made a perfect recovery, feels very well, and is about to go home. She had had much ovarian pain, and had been a sufferer for eight years from intense dysmenorrhœa. The pain was most severe two or three days before the period, and was somewhat relieved when the flow began. She had become considerably emaciated, and was extremely nervous and excitable. Latterly she could not walk or stand with comfort, and the slightest exertion brought on intolerable pelvic pain. She said her life was a burden as it was, and that she desired relief at all hazards. She was willing to take the risks of an operation; but women are often willing to do that, not fully understanding what the dangers are. The examination showed the left (the cystic) ovary firmly bound down behind the uterus. All remedies had been tried; pel-

vic cellulitis had been diagnosticated. The prolapsed ovary was very tender; it was impossible to make the slightest pressure without causing great pain. She had been married, but had never become pregnant. Menorrhagia was a marked feature of the case, with frequent nausea and pains in the breast. She was an intelligent woman, not at all hysterical, and had followed the advice of her physicians faithfully for years, changing climate, undergoing treatment by galvanism, etc., but she grew steadily worse rather than better; and when I found that no other means offered a chance of relief, I advised and performed the operation for removal of the ovaries and tubes, with the result described.

But this operation should never be decided upon hastily, or before all the symptoms have been carefully weighed and studied. Do not trust too much to what the patient tells you or what her friends tell you. Observe for yourself, and take plenty of time for observation. It is better to lose six months or a year by waiting than to make a mistake and sacrifice a healthy ovary. If we are really satisfied from physical examination that the ovaries are seriously diseased, of course there should be no unnecessary delay; but the diagnosis is often made chiefly from the symptoms, and it is against too early operation in such cases that I make an earnest protest. I believe that many ovaries are removed to-day which ought to be let alone. Every new operation is liable to abuse, and the one we are considering is not an exception. I advise you to look upon the removal of the ovaries as a necessary evil,—to be resorted to only after all other means of relief have been thoroughly tried.

I have a case now under observation which, five months ago, I was called to see in consultation. One ovary was prolapsed and exceedingly tender. There was intense dysmenorrhœa, with nearly all the symptoms I have described as peculiar to the other patient whose ovary is before you. I ascertained, however, that only three months previously there were none of those symptoms, and that the woman was then in fairly good condition. The disease was recent, and time had not been allowed to do its work. I therefore differed from the two physicians who had persuaded themselves and the patient that an operation was necessary. I advised

waiting and the use of such measures as I have mentioned as appropriate in these cases. Gentle pressure was made on the prolapsed and congested ovary, the uterus being carried well forward at the same time. The vagina was lightly packed with elastic cotton. The neuralgic pains were relieved by the use of the constant current, a flat sponge electrode being placed under the sacrum, and the small sponge applied to the abdominal wall. The general health was at the same time carefully attended to. The result so far has been satisfactory. The ovary cannot now be felt; the dysmenorrhœa has diminished until it is quite tolerable; the patient takes regular out-door exercise, and is in a fair way to get well without the loss of her ovaries. She is a young married woman, and there seems now no reason why she should not become a happy and prolific mother.

As to the results, in well-chosen cases they are generally good. The pain is often entirely relieved, and the shattered nervous system gradually recovers its equilibrium. Women are always anxious to know whether they will become masculine or changed in any way after the loss of the ovaries. I have not noticed any material changes of this kind. You saw and examined a patient last week who, five years ago, had both ovaries removed. She brought a letter from Professor Hegar, stating expressly that he removed two ovarian tumors, right and left. As you saw, she was a very fine specimen of a feminine woman. She told us she had menstruated regularly ever since the operation. If both ovaries are so diseased that they do not perform the functions of ovaries, their removal cannot even technically render the woman any less feminine. The patient upon whom I operated a year ago last December wrote me a year afterwards that she had not failed to menstruate once since the operation. Menstruation had not been attended with pain. I removed in that case both ovaries and tubes, and both were diseased; but, as a rule, after removal of the ovaries and tubes, menstruation ceases or becomes irregular.

A good deal of interest attaches in these cases to the diseases of the Fallopian tubes themselves, which are rather common and not at all easy to diagnose, especially in women who are fat. The Fallopian tubes, for several reasons, may become inflamed, a common cause being gonorrhœal poison,

—the inflammation passing up the uterus and into the tubes. Occlusion of the tube at the uterine extremity is not at all rare. In women who have this condition we often find that they suffer from intense pain before their periods, sometimes relieved when the flow is established; often they have exacerbations once in three or four months, and after intense pain and partial collapse they have a period of comparative comfort, continuing perhaps for one or two months, or until the tube again becomes distended, when it may perhaps discharge a portion of its contents, consisting of serum or pus, or it may be of blood, into the peritoneal cavity. Distention of the Fallopian tube with blood is least common. I operated upon a patient in November last where this condition was found. There was an ovarian tumor on one side, and on the other side the tube was occluded at both ends and distended with thickened blood; the corresponding ovary was hardened and contracted, and might be called cirrhotic.

PELVIC CELLULITIS.

This woman is 28 years old; has been married seven years; has had twins and two miscarriages. The first miscarriage occurred six years ago, and the last three years ago. She has been ill for six years. She menstruates regularly for three or four days, but she suffers from pain in the left side before menstruation. The pain sometimes comes a day before the flow. She complains of feeling sore inside, of pain in the breasts, and of nausea,—common symptoms of ovarian disease. The uterus is found to be anteflexed and fixed, the cervix small. There is induration of both sides of the organ, which would lead us to infer that the patient had suffered from a parametritis, which fixed the uterus. Where this is the case, it is almost impossible to detect an enlarged or congested ovary. That condition is very often the beginning of ovarian disease. An acute attack of pelvic peritonitis also is often followed by an inflammation of the Fallopian tubes. Next to gonorrhœa, this probably is the most common cause of inflammation of the Fallopian tubes. Moreover, the pelvic inflammation leaves the ovaries, tubes, and uterus fixed, matted down, bound together, and any congestion or inflammation of the uterus afterwards is apt to cause much pain. There

is a slight laceration of the cervix, which has cicatrized and is hard to the touch. I doubt whether this has much to do with her symptoms. After a marked pelvic peritonitis, it is improper to operate upon the cervix. This patient ought to be where she can keep quiet the greater part of the time, where she need not walk or stand much, or exert herself in any way. It would do her much harm to ride over a rough road, or even in the street-cars. By the application of strong iodine around the cervix from time to time, and by packing the vagina gently with cotton and glycerin, the inflammation would be improved; but any improvement will be very gradual.

ARRESTED DEVELOPMENT OF THE OVARIES.

This patient is 22 years of age; has been ill for a year. She has never been regular in menstruation. In September last, Dr. Anway removed an extensive warty growth, covering the whole vulva. It had been supposed to be due to gonorrhœa; but, on examination, we became satisfied that it was not. The growth was removed, and none of it returned. Afterwards we found that the hymen was perfect, the vagina was very small indeed, and there was no reason to suppose that she was not a virgin.

She gives a peculiar menstrual history. She says she has menstruated only seven times since she was seventeen years of age.

Examination simply shows retarded development of the ovaries. There is no evidence of inflammatory trouble. She is perfectly healthy, and does not suffer from pain in the pelvic region. Her only trouble is that she does not menstruate regularly, and I do not think, therefore, that we should interfere if we did not find, on further inquiry, that she has a reason for seeking advice, and that is that she is intending to get married. She is a comely young woman; and there is no apparent reason why she should not marry. But she knows that something is wrong with her, and desires to have it corrected. If a woman have marriage in view, of course it is justifiable to resort to some treatment with the idea of stimulating the torpid ovaries. One of the means for doing this, but a means which is not, even when carefully watched, entirely free from danger, is the use of the galvanic stem. One of our cases of amenorrhœa, after wearing

the stem a few weeks, menstruated twice in succession, and felt much encouraged. It is true the electrical current excited by the stem is feeble; but, acting constantly, it sometimes has the desired effect. In the case referred to it was worn without any discomfort. If this woman did not intend to get married, I think she would be wiser not to subject herself to any treatment, for at present she is in good health and has no trouble on account of absence of menstruation. Still, if she insists upon having treatment, and if she were able to secure it, there is another method for stimulating the ovaries to activity, and that is by placing one electrode of a constant-current battery of ten or fifteen cells over the ovary and the other under the sacrum, and letting the current pass for ten minutes three or four times a week. This will not infrequently cause a metrorrhagia, perhaps a periodical one. But the probabilities are that as soon as the patient ceased the treatment there would be a relapse. A good many cases are reported as cured by galvanism in which, if followed up, it would be found that the cure was only temporary, lasting only so long as the treatment was continued. Of course the diet should be carefully regulated and the patient's general health attended to.

PROLAPSUS OF THE OVARY.

This woman is 20 years old; has been married ten months, and for ten months she has been complaining. She menstruates regularly and without pain. Before her marriage, the duration of the flow was four days; since her marriage it has been seven days, and she menstruates profusely. She suffers also from pain in the left side.

She comes here because she has, almost constantly, pain in the left side, low down, and especially when she stoops. She says she is anxious to have children, and she knows no reason why she has none; her husband is healthy and strong.

There are interesting features here, because the woman does not give symptoms corresponding to what we find on examination. The finger, on being introduced into the vagina, comes in contact with a tumor posteriorly, which must be either the retroflexed uterus, a fibroid, or a prolapsed ovary. If it be a sharp degree of retroflexion, she ought to have dysmenorrhœa, which she has not. If it be a fibroid, there should be more discomfort than she

complaints of. One might suppose, too, from the presence of this tumor, that there would be constipation; but she says she has no trouble whatever with the bowels, —they move freely every day. The diagnosis can be made positive only by the passage of the sound. It is found that the sound goes backward and to the right, which proves that the mass felt in that region is the fundus of the uterus. The organ is sensitive to the passage of the sound; but the patient is expecting to menstruate in a day or two, and there may be more congestion and sensitiveness than usual. I am inclined to think also that there is prolapsus of the ovary backwards and to the right. The uterus being retroflexed, it becomes larger and more congested at the menstrual period than it would be if it were in its normal position. The patient told me a fact in her history which you did not hear,—namely, that her husband gives her a great deal of pain on sexual intercourse. There is one very tender point on making pressure, and it corresponds to what I take to be the prolapsed ovary. The treatment of these cases we have already considered pretty fully.

NON-DEVELOPMENT OF THE OVARIES.

The patient is 35 years of age, has been married twelve years, has never been pregnant. For five years she has suffered from dysmenorrhœa. The flow is scanty. Her last period, which occurred a few days ago, continued only one day. She never misses a period.

We find, on examination, that the uterus is directed backward, and on introducing the sound the patient winces and complains of pain. The sound enters only two inches, and is directed backward. The ovaries also are in a state of non-development. This woman, who is about 35 years old, has genital organs which are scarcely more developed than those of girls of ten or twelve years. It is not likely that we can do much for such a patient. It is very probable that she has inherited conditions which medicine and surgery can never remedy. She would derive some satisfaction from being kindly informed that her condition is incurable. She would then become reconciled to her state. She does not suffer much, and there is no danger to her life. She has never had children, and there is scarcely any possi-

bility that she ever will have. She would be safer without treatment than with. You might cause a temporary metrorrhagia by active treatment, but that is about all you could do for her.

LEUCORRHOEA OF THE MENOPAUSE.

This patient is 46 years of age, has borne seven children. Has had two miscarriages. The last miscarriage occurred nine years ago. For the past six months she has complained of a constant pain in the pelvic region, burning pain in the vagina, with profuse leucorrhœa. She has ceased to menstruate. A few months after women cease to menstruate there is sometimes an irregular and rather profuse discharge from the uterus, which is irritating and sets up a vaginitis. That is what we shall probably find this patient suffering from. She has one symptom which would lead us to suspect salpingitis. For about three days she suffers from severe pain in the right side, sharp, "like needles," and the next day she has a profuse discharge of pus, followed by relief from pain. We find a slight laceration of the cervix, which probably took place at the time of the birth of her first child. It is one of those lacerations which never do any harm, and need not be operated upon. If the patient were put under ether we could say positively whether or not there is a tumor present, pointing to salpingitis, but from the examination which we are permitted to make to-day I should feel disposed to think that her condition is what I just stated,—a vaginitis due to an irritating, irregular discharge from the uterus just after the menopause. We will prescribe for her full injections of hot water, and, after the water, an injection of infusion of tobacco.

PROLAPSUS OF THE UTERUS.

Here is a patient 52 years old, a widow for five years, the mother of nine children. She had a miscarriage nine years ago. Her last child was born seventeen years ago. She has not menstruated for four years past. She complains of "falling of the womb." We find her wearing an antiquated form of copper pessary, which has done more harm than good, and has prejudiced the patient against the use of pessaries. But she will nevertheless be greatly benefited by a cup-pessary of sufficient size to retain the uterus well in position, one in which the stem is not

so long as to be in the way and make painful pressure when the patient sits. We have not failed to give relief by this method in any previous case of prolapsus, and doubtless this patient will find that she can wear a proper pessary with great benefit and convenience. The propriety of an operation on the vaginal walls may be considered in the future.

ENDOMETRITIS.

This woman is 24 years old. She has been married six years, has had no children. The first few years of her menstrual life she menstruated regularly without pain. She began to menstruate at twelve, and to suffer at sixteen. The flow continues for seven or eight days. She has no pain in the mean time, but for three days at the period she suffers so much that she has to lie down and give up her work. There is no pain until the commencement of the flow. She has grown thinner rather than stouter. This case, and the one which we saw in which we found retroflexion without corresponding symptoms, remind me to speak of a class of cases in which you find flexion of the uterus disappear during the progress of menstruation, and in this class of cases it is well to make an examination during the flow. The uterus may be found to assume a position quite different from that occupied during the interval. During the menstrual period the organ will straighten up, and the flow go on without any pain whatever. After the periodical congestion has ceased, the uterus again becomes relaxed and flexed. I do not think, however, that this condition exists in this patient. She is probably suffering from an endometritis, which gives rise to sterility, and which can be treated with hopes of success. We will direct injections of hot water to be given two or three times a day, as hot as she can bear them, and applications of the strong tincture of iodine, or of strong carboic acid, should be made to the uterine canal about once a week.

OVARIAN TUMOR.

Our last patient this morning is 37 years of age, married twenty years, has had four children and four miscarriages. The last child was born eleven years ago. The last miscarriage occurred two years ago. During the last six months she has complained of pain in the left side. She menstruates

regularly without pain, the flow continuing three or four days. The patient says that for six months a small tumor has been noticed low down on the left side. We find there a lump of irregular form occupying the region of the ovary. The uterus is pushed over to the right. If the patient were put under the influence of ether, a definite diagnosis could be reached. The tumor feels very hard for a cyst, yet not hard enough for a fibroid. We have, undoubtedly, some form of tumor of the ovary, probably malignant. The tumor is now as large as a small orange, and seems to be attached to the pelvic wall. If it increase in size and continue to cause pain and enfeeble the patient, it would be justifiable to make an exploratory incision, being prepared to remove the growth, if possible. For the relief of the pain, which is an ovarian neuralgia, there is nothing better than the daily use of the constant-current battery; but in patients of this class that remedy is not within reach, unless they are in a hospital, and some anodyne must take its place.

This patient will be kept under observation, that we may note any changes in the size or condition of the tumor.

ORIGINAL COMMUNICATIONS.

NOT GUILTY, BY REASON OF INSANITY.

BY N. ROE BRADNER, JR., A.M., M.D.,

Late of the Pennsylvania Hospital for the Insane; author of "Sanity and Insanity," "Lunatics at Large," etc.; member National Association for Protection of the Insane, etc.

OF late, public attention has been irresistibly and very frequently drawn to the published details of tragedies shocking and dreadful in themselves, and alike alarming and depressing in their influence over those whose interest is thus involuntarily enlisted. What can be done to check or restrain this terrifying and spreading epidemic of crime? There is something revolting and terribly responsible in the practice of capital punishment,—the slaughter of human beings,—even though it be sanctioned by law as the just punishment of the murderer; moreover, it is inefficient.

This destruction of human life; this demolishment of the glorious temple built in God's own shape,—that which no power

of mankind could reconstruct or re-inhabit, —is the exercise of a power, the right and responsibility of which we might, with becoming propriety, hesitate to assume. It is forcibly argued in favor of capital punishment that it is the only means of restraining murder, and that, were it not for the terror it infuses in the minds of dangerous men, crime would be more prevalent, murder more defiantly committed, and that no innocent chamber of sleep, or peaceful fireside, especially in the midst of wealth or other objects of his cupidity, would be safe from the invasion of the assassin. Yet we tolerate capital punishment, and murder abates not. Whether we do or do not exceed our moral right, we hang the murderer, in the practice of which relic of barbarism we strangle and choke him to death who is convicted of felony, notwithstanding some are so convicted who are innocent, while even the most guilty often manage, by some subterfuge, to escape. Too often, indeed, do we find our best citizens exercising their most strenuous efforts to evade the prescribed law and by any stratagem avert from some criminal the penalty of his crime, simply because he, and perhaps all mankind, may feel the punishment to be too severe. His crime may have been committed under the pressure of circumstances that few men could resist, but for which the law has made no provision in extenuation of punishment. In such an hour of peril we feel constrained to extend our helping hand; but, if the sympathy and assistance of every man in the community in which he is tried be enlisted in his behalf, it cannot avail to him if the law is respected and remains inviolate. If, on the other hand, we permit the law to be, in his case, ignored or misconstrued, and he becomes so fortunate as to escape the terrible punishment which the law says shall expiate his crime, then has the great gate of justice been unguardedly opened and through its portals do other prisoners escape, without reference to their innocence or guilt, or the enormity of the crime they may have committed. This is no fanciful picture, but a true portraiture of the evils and insufficiency of capital punishment, and the fact that the severe and extreme penalty may not only be averted from one most guilty, but fall upon an innocent head. Would it not be better for us to adopt, even at this late

day, and hereafter profit by the maxim so widely and forcibly promulgated by Blackstone, that "Crimes are more effectually prevented by the *certainly* than by the *severity* of punishment"? Let the criminal know that he will be punished for a certain act, and he will refrain from committing that act. It does not answer the purpose that he risks a much more severe and terrible punishment, so long as there is any doubt about it. So long as he has any hope of escape, even the hope of pardon after sentence of death, he will recklessly risk all chances against him. It is the nature, education, and profession of the hardened criminal not only to risk danger, but to hope for escape; and he will continue to risk and hope until his punishment, even though it be less severe, is made more certain.

Referring again to Blackstone, I beg to repeat his own words supporting this theory, and which are to be found in vol. iv. of the Commentaries, chap. i., § 19: "Juries, through compassion, will often forget their oaths and acquit; and judges, through compassion, will respite one-half the convicts. Among so many chances of escape, the hardened offender overlooks the multitude that suffer. He boldly engages in some desperate attempt to relieve his wants or supply his vice; and if, unexpectedly, the hand of justice overtakes him, he deems himself peculiarly unfortunate in falling at last a sacrifice to those laws which long experience has taught him to contemn." While it is not the purpose of this essay to discuss the right or propriety of capital punishment, I cannot, at this time, forbear calling attention to my firm conviction that vice and crime may be mastered and expunged from our society, but only upon the same principle and by the same path they were allowed to enter, namely, by moderate degrees.

Vice and virtue are antipodes, but inculcated and indelibly impressed upon mankind, one at the expense of the other, in an open race, upon even advantages, to be won or lost by the same criterion. The intelligent and educated man has not become so at once and perforce, but by slow steps and diligent study. Likewise has he who is hardened and lost in crime been led to his deplorable condition by a graduated and perhaps lengthy course of vice. Many persons reared in vice and

crime have been taught to adopt and love a virtuous life, but such a change is not effected suddenly; neither does the scholar learn his profession except by gradation, step by step. In the same way may evil be learned.

The boy, bad at heart, who would be horrified at the thought of his becoming a murderer may easily be taught and even learn the strongest, if not the first, lessons through the very laws we have adopted to deter him and punish crime. He goes early to prison and is received in the company of hardened criminals, but peradventure is pardoned on account of his tender years.

Yet has he already learned the most dangerous lesson in the school of crime. He has escaped once, why not again and for a greater offence? Let that boy, in the first instance, be sentenced, not unjustly or too severely, and let him *pay* the penalty, whatever it is,—no pardon, no hope of escape,—and that punishment may be the means of keeping him out of the path of vice and the grave of a felon. By means of the pernicious pardoning system our streets, our high social positions, nay, our churches, are infested with pardoned criminals, men whose purses have bribed justice. Shocking! Yet it is true, and, I think, largely because our penalties for crime are most extreme in their severity, but equally uncertain in their fulfilment. The poor, the helpless, generally suffer this extremity of the law, while the powerful, no matter by what ignoble means they may have acquired wealth and position, escape, if by no other means, then by the pardoning power. Should we not, at one stroke, do away with these two bad instruments,—the one of injustice, the other of inhumanity? Let capital punishment be substituted by some more humane and justifiable penalty; let all degrees of punishment be lessened, if need be, to insure punishment at all; and then let there be no more pardons, except only for those who may have been unjustly convicted and whose innocence has been clearly established.

It is no uncommon occurrence for a jury sworn to determine the guilt or innocence of an alleged felon to return a verdict of "not guilty," when there is no shadow of doubt as to his having committed murder, but because of some extenuating circumstances attending or surrounding the act,

and by reason of great public sympathy for the prisoner. On the other hand, if the jury find a verdict of guilty, it becomes the duty of the judge to pronounce the sentence of death. It becomes a terrible responsibility for the juror to say "guilty" when he considers the consequence; it is humane and merciful in him to entertain this consideration; but is it right? Is it not outrageous that men called to act as jurors should be placed in a position so awkward and dreadful; that, having been sworn, they must either pronounce a man not guilty, whose guilt they surely know, or to say guilty, knowing the verdict will consign a fellow-man to the gallows who merits not that awful punishment, except through the imperfection of our laws? What can such a jury do but to acquit, notwithstanding proof of guilt, and that they have sworn before God and man to decide upon the evidence? What a farce, what a prostitution of law, when a jury must first consider the consequence, before they can decide whether a black object is black or white!

It is not within the province of the jury to determine the punishment; that is already provided for. Their duty and right embrace only one question, Is the prisoner guilty? And now, this day do I solemnly and earnestly protest and declare that it is an outrage upon the jury, a disgrace to law, and an insult to social science, that this state of justice should exist in our enlightened age. We laugh at the Scotch verdict "Not guilty, but don't do it again," but what better is our own reasoning, "This man must not be hung, therefore he must be insane"? In a trial for murder every averment must be established beyond a reasonable doubt. One of these is malice aforethought. If the commonwealth fails to prove malice, she fails to prove murder. But there can be no malice or criminal intent, when the mental condition of the accused is such that he is incapable of forming an intent, or distinguishing between right and wrong. This is the foundation of the defence of insanity, that has become such a ready obstacle to the progress of justice, and the oft-repeated charge of the judge, "If the prisoner was of insufficient mind to enable him to comprehend the act, or distinguish right from wrong, then is he not guilty." A man, perhaps a model of character in the society in which he moves, is brought face to face with a villain who has robbed

his home of its most precious endearments, life and virtue; he shoots him down and surrenders himself to justice. He has done no more than he ought to have done, his act was praiseworthy; and yet the jury before whom he is tried must find him guilty of murder, or insane. The law in its present imperfection provides no other alternative. The preposterous reasoning that alone suffices to rescue that life from the ignominious end of a felon, is that by reason of insanity he was irresponsible for the act,—an act which every man worthy man's name, or to be the custodian of home and virtue, would be ashamed to leave undone or to hesitate in its accomplishment. If it were insanity that deals thus justly with lawless seducers and assassins, then would I call insanity a noble virtue. But while juries are humane and charitable in thus disposing of cases that so touchingly appeal to their sympathies, they are not to forget the law that bids them not regard personal interest or popular favor, forgetting compassion and tenderness. It is their duty to be influenced in their verdict by facts alone as produced in evidence, no matter whether it is what the world most desires to hear or that which may bring sorrow to every heart. I insist, it is not the duty or right of juries to mould their verdicts to suit the will of the people. Let the principle be once established that a jury may determine whether a man is sane or insane upon the single issue whether or not that jury wish him punished for a certain act, and trial by that jury becomes a farce.

We have recently seen remarkable instances of popular approval of exactly such action by jury in the conflicting trials of Charles J. Guiteau and James Nutt. Guiteau was a depraved and dangerous man, but I do not think that the man exists who believes he was of sound mind. The form of his mental disease and the extent of his responsibility were just subjects of much study and great diversity of opinion. To maintain, however, that he had no mental infirmity was an opinion too preposterous to be entertained by any, even the most anxious to do so, after the closing scenes of his life. It is true that the crime he committed was so dreadful in itself and its consequence, and so demoralizing in its precepts, that the unanimous voice of the country called for his blood. Let us, however, for a moment suppose that Guiteau

had been an inmate of some asylum, demanding his discharge and restoration to liberty, in spite of the proof of insanity as produced in evidence and testimony at his trial in Washington; where is the judge who would have taken the responsibility of his sanity, and granted his discharge and release from asylum restraint?

Yet there is no getting around the true fact, that if he were sane in one situation he must be so in the other. No, the state of circumstances there was this,—Guiteau must be hung; *ergo*, Guiteau must be sane.

Passing now to the other case, of more recent date, the situation is exactly reversed. The public demanded the exoneration of the prisoner, and, as there were no other means of effecting this end, why, as a matter of course, he is proved to be crazy.

On the 24th of December, 1882, at Uniontown, Pennsylvania., N. L. Dukes, a lawyer and member-elect of the State Legislature, was called upon at his hotel by Captain A. C. Nutt, Cashier of the State Treasury. A quarrel between them immediately ensued, and, other parties coming into the room, Captain Nutt was seized and held, whereupon Dukes drew a revolver and shot him dead. It then appeared that Dukes had betrayed Nutt's daughter, and, subsequently writing them the most vile letters, had finally murdered the outraged father of the despoiled home. Strange to say, a jury was secured that acquitted Dukes on the ground of self-defence. Dukes then defiantly faced James Nutt, brother of the outraged Miss Nutt, and son of the murdered Captain Nutt, who in turn, and very properly, shot Dukes, as if he had been a mad dog.

Now comes the trial of James Nutt for the murder of N. L. Dukes. The jury is sworn to decide whether he is guilty or not guilty. There is no doubt of his guilt, but if the jury say guilty the consequences will be too terrible to contemplate, wherefore the question is promptly changed from whether he is guilty or not to whether he is sane. As a matter of course, James Nutt is acquitted on the ground of insanity, the alleged insane act being, in all probability, the most praiseworthy act of his life. I now ask, who is there, having read a page of law, who does not comprehend that in each of these cases, that of Guiteau and that of Nutt, the supremacy of the law was ignored, while in the two cases as

viewed together the principle of justice was compromised in one and contradicted in the other? Making use of the present opportunity to express my views, I not only believe that Nutt was sane and Guiteau insane, but hazard my confident opinion that a jury of twelve honest and intelligent men could not be found to pronounce James Nutt a more insane man than Charles J. Guiteau.

And yet so much more powerful is the influence of human sympathy than respect for law, that in our day the sane man, by reason of assumed insanity, is acquitted, having shot a villain, while an insane man was hung for shooting our beloved President. Let us now, as scientific men, take a dispassionate view of this situation and detect the error that certainly exists and that has so plainly manifested itself in these two murder-trials.

Life is sacred. The vilest man living within this State, unless a convicted felon, is as much entitled to the protection of the law, in the preservation of his life, as is the governor, or any one of the judges. Likewise is it in the eyes of the law as great a crime to murder the most miserable tramp, as it would be to assassinate the chief magistrate. In both of the trials referred to, justice was administered not in accordance with the act that brought the prisoner to the bar, but with reference to the consequences of that act. For such construction of law there is no authority. It would moreover be a most dangerous precedent to establish, that the punishment of a criminal should be measured by the consequences of his crime; else there would be no protection for the life of any man except him whose life could be proved to be valuable; a social status alarming to contemplate, but towards the dangerous shores of which we even now are drifting. No, it is not the result of crime, but crime itself, that law would punish; wherefore it provides no difference in the penalty of a murderer because of his lofty or degraded position in society, or that his victim was the most prominent and worthy member of society or a worthless outcast. Even so should it be in the consideration of insanity. If this mental infirmity secure immunity for the rich or powerful, so should the poor and despised be considered at the bar of justice when an insane act has placed him in the criminal dock; and so should his life be spared

when it becomes certain that his outrageous act was the offspring and outgrowth of insanity. This subject is too important to be overlooked or disregarded. We know not how soon any one of us may be called upon to defend a personal, perhaps dear friend, whose mental disease, though now latent and even unsuspected, may ere long quickly develop and place him in the attitude of a criminal. Most earnestly do I appeal to all men, and especially to lawyers, judges, and juries, to weigh well and honestly the evidence both for and against the plea of insanity.

I am pleading now in the cause of the insane, and not in behalf of criminals who feign insanity, and whose shrewd counsel, in *dernier ressort*, endeavor to obtain for them a verdict of acquittal on the ground of insanity that does not exist. On a former occasion ("Sanity and Insanity," page 6) I called attention to the dangerous as well as dishonest practice of offering the plea of insanity in every desperate case, without reference to whether or not the alleged criminal is really insane; and since that time the pernicious custom has not abated. Too often do we hear in every circle that the "insanity dodge" is overdone, and too frequently successful. Not that it is a matter of so great importance that one impostor and guilty criminal should now and then successfully practise this subterfuge and escape just punishment, but that such precedents have bad influences and are very detrimental to the interests of those who really are insane.

So common has this line of defence become, so much has this just and humane provision been abused, that we already doubt or discredit the honesty of *all* such pleas, until we are convinced by conclusive evidence. The consequence is, that when one who really is insane is brought to trial for an alleged murder, and his mental infirmity advanced in his defence, the public mind, having become distrustful through oft-repeated deception, receives his plea with little favor, and extends but little sympathy to the prisoner tottering perhaps under "the last infirmity of a noble mind."

Repeated instances have come under the observation of the writer, where evidence, conclusive to the mind of an experienced expert, has been ignored by judge and jury, and the wretched lunatic sentenced to suffer the penalty of death;

to be strangled, because forsooth he was so unhappy as to be insane, and so unfortunate in poverty that his just and rightful defence could not be made sufficiently clear.

2038 RACE STREET.

FOUR CASES OF BRIGHT'S DISEASE IN ONE FAMILY.

BY HIRAM CORSON, M.D.

CASE I.—Mrs. S. D., 28 years of age. The last of her three children was born May 10, 1871, in good health. Three months prior to its birth she had noticed a swelling of her ankles which had increased and extended to her body before labor came on. The dropsy scarcely subsided at all while she lay three weeks in bed; her physician then began a treatment, and continued it for three weeks more, with no relief. The feet had so swelled that the toes cracked open, but under treatment during the next three months she gradually improved: though still greatly swelled in the lower limbs, she was up and doing a good deal of work. She then took no medicine except for a short period in 1873, when she was in the hands of a quack in Philadelphia. At that time her husband fell sick and died within three weeks. Such is her account of her case upon coming to me, March 12, 1874, three years after her feet first began to swell. She was then greatly anasarcaous; the legs, thighs, and body, even the neck and face, were quite œdematous. The menses were regular and in proper quantity, but during the interval she always had one day of sick-headache, just two weeks after the menses disappeared. At no other time was the head at all affected. She had a good appetite at all other times, and slept well. Specific gravity of urine, 1006: upon boiling it precipitated nearly one-half albumen. On the 20th of March, 1874, I began treatment by directing one large teaspoonful of cream of tartar and one teaspoonful of infusion digitalis to be taken in a tumblerful of water three times a day, and I ordered a diet mainly of skimmed milk. Her pulse was 96 and very indistinct. April 21, pulse 68, specific gravity of urine 1013. May 1, gave her iron and quinine for two weeks, then muriated tincture of iron alone, and had her body bathed daily with weak solution nitro-muriatic acid. The diet of skimmed milk was continued until June 15, when the swelling of limbs and body had disappeared, the pulse being 72, albumen one-seventh, and no casts to be found. She then thought herself well, and ceased to take medicine, and applied herself to a general supervision of household affairs, making up sixty pounds of butter per week. Three months afterwards, September 15, I was again sent for, and found the former con-

dition had returned: urine was one-half albumen, limbs much swollen, and now on Friday of every week she had sick-headache all day; on other days she was quite active. I prescribed digitalis, cream of tartar, and iron as before, but without much change in her condition for the next five weeks; the sick-headache recurred regularly every Friday; pulse 88 and feeble; urine about a quart daily, with at least one-third albumen. Then, October 24, I had her to visit Prof. Alfred Stillé, of the University of Pennsylvania. She, with a friend, rode to his office, being quite active. He advised a tablespoonful three times a day of the following mixture,—
 ℞ Tinct. ferri chloridi, f3ss; acid. acetic. diluti, f3j; liq. ammonii acetat., f3iiss; elix. aurant. cort., f3ss; glycerinæ, f3ss,—and a hot-air bath at night, with no restrictions in diet,—this last partly because she was stubborn in relation to restraint in diet.

January 1, 1875, but slight change; still sick every Friday all day; pulse 80, but there is less albumen in urine; has had a cold, with much cough, for a month. Ordered one teaspoonful of infusion of digitalis, one of syrup of squill, and one-twelfth of a grain of sulphate of morphia, three times a day, which relieved her cough greatly in a few days, but the albumen increased to two-thirds. On March 1 she was weaker, lying down, in daytime an hour or two, but was still pretty active, pulse 90, coughed a good deal, though expectorating but little; she breathed easily; considerable mucous rhonchus. March 15, four days since, she went into an unoccupied house to direct those cleaning it, remaining there in the cold several hours, thus increasing her cough greatly. I directed her to resume the iron and digitalis. April 10, she has had no spells of sick-headache (which I should have stated was always accompanied by frequent retching and vomiting) for about two months; slept well, ate well, heart beat regularly 88 per minute, though so weak was the pulse at the wrist that I could scarcely feel it. Her menses, expected on the 28th of February, failed to appear. Her vision has been perceptibly affected for three weeks (since the failure of the menses), seeing as through a mist, though the eyes looked clear. This affection of her eyes, taken in connection with her sallow face and swollen eyelids, her scanty urine,—less than a pint daily,—swelled limbs and body, casts and scales and albumen in the urine, and suppressed menstruation, warned me of approaching death. May 6, punctures in the limbs, a few days since, reduced the swelling of the body; pulse 112; urine more than a quart daily. She could not see my knife at a distance of three feet; pupils were greatly dilated; slept well without anodynes; has had no headache for months, and only one sick day; can hear well; urine nearly one-half albumen. Though never before alluding to it, she now says that ever since

the invasion of her disease she has had *spells* which were quite alarming, occurring three or four times a day, at intervals of several days, and which are becoming more frequent. A pain would strike her over the sacro-iliac junction, and, in an instant, fly to the pit of the stomach and then to the nape of the neck. The paroxysm lasted only a minute or two, perhaps less; but while it lasted she felt "as if her breath was stopped and she must die at once;" and her sister said that while it continued her head was thrown back and her countenance looked like one dying. But, despite all this, she had been on a visit to her father's house, a mile away, and was smart and cheerful. Scarcely knowing what to prescribe, I directed her to inhale sulphuric ether a few times daily, and showed her how to use it. She had been taking one-sixtieth grain of strychnine three times a day, and now—May 13—her sight had somewhat improved, and she had not had a single spell since she began, a week ago, to use the ether. Some nights she had not rested well, but whenever she took one-quarter grain of morphia she could get good sleep. Can it be that the ether promptly checked the spells? Her appetite was pretty good, and she ate what she pleased. May 16, pulse 88, pain under sternum shooting to left shoulder; urine very albuminous. Prescribed morphine to relieve the pain. Was taking digitalis. Having been three days without strychnine, I now advised one-fortieth grain three times a day. June 3, 3 P.M., I was sent for in haste, and found her in great distress, wholly blind, and apparently helpless, but sitting in a chair, tossing, tumbling, moaning, and occasionally crying out, "Oh, my! Oh, my gracious!" and scarcely conscious of our presence. I had her placed in bed, but her distress was fearful. Applied ether, and after getting her well under its influence kept her so for several hours. At 9 P.M., when still slightly under the influence of the ether, she had a terrific convulsion. I stayed with her through the night, giving moderately, though with much difficulty, small doses of hydrate of chloral, and one-quarter grain of morphine hypodermically; but despite it all she had eight convulsions before morning on the 4th. She had taken sixty grains of chloral in the last six hours. After 5 A.M. she had no fits, but was unconscious through the day. Gave water as drink, used the catheter, and awaited developments. Having now a rest from active duty, I took a review of the strange case before me,—a strong case, apparently, of Bright's disease. Memory brought to me numerous reported cases of convulsions in puerperal women, resembling these, and charged to uræmic poison by those who believe in blood-poisons; also brought to me many reported cases of convulsions from strychnine which resulted in death; and I feared that possibly my

one-fortieth grain doses, which she had taken for eighteen days, had caused this fearful suffering to my afflicted patient. It was not a pleasant thought, but I hoped that the uræmic poison, which is strongly charged with destroying so many helpless lying-in women, was not a myth, but a real power, now about to have an easy victory over her who had been for four years afflicted with the dreaded albuminuria; who had been blind for months; who had long suffered from those *spells* which brought her face to face with death; whose body was sallow, anæmic, and dropsical; whose urine was scanty and filled with albumen and casts of tubes,—although had she died then I would have been very uncomfortable; but she did not. Next day, June 6, conscious, answers questions sometimes; pulse 88. Drew half-pint urine, specific gravity 1010, one-third albumen. She continued to improve until the 22d, when she walked down-stairs, could see my hand a few feet away, and had a good appetite.

On 24th very sick at stomach. After failure with reputed specifics, used ice with great relief; pulse 100. Next day, pulse 72; could see about as yesterday; had no headache, no sickness, pretty good appetite; eats pickled oysters and whatever else she chooses; goes up and down stairs easily; has no dropsy; slept well last night on one-quarter grain sulph. morph.; did not rise last night at all; feels so well that she says if she could see she would think herself well. For some time she has had an involuntary jerking of the legs in the night-time, after having passed one or more nights without taking one-quarter grain morphine. When thus affected, a small dose would remove it in a short time. I prescribed only some aperient medicine. She continued to improve, walked in the yard, ate well, and could see better, until July 5, when she became dull, did not care to go out or to talk. July 6, nothing unusual about her till 9 A.M., when she began to talk strangely, and by noon was tearing off her clothes and appeared to be wholly blind and apparently unconscious. I saw her at noon; she did not know me; pupils somewhat dilated, pulse 128, but I could not count it at the wrist. She would suddenly half rise in bed and immediately fling herself down. Gave her ten grains chloral every hour till 3i was taken, then one-quarter grain morphine over the pit of the stomach by the syringe. At 3.30 P.M. she had a fit lasting five minutes, and another at 4.30 P.M. At 4.45 I injected one-quarter grain morphine over stomach, drew off urine, natural in odor and color, albumen by heat one-third, by addition of nitric acid one-third more. Had five more fits before next morning at eight o'clock, but was not so deeply unconscious as on the former occasion, and had not so much chloral or morphine. At 9 A.M. (July 7), one hour after last fit, I saw her; conscious, pulse 112, pupils natural, lies

with eyes closed; has taken no medicine since ten last night. Drew 6 oz. urine, clear, natural in appearance; is wholly blind. July 11 (noon), sick and vomiting all the morning (after a restless night); is very restless, and, though dull, is crying out as before. Gave her twenty grains chloral, and in an hour twenty grains more; in an hour more she was much composed. Had not urinated for fourteen hours; drew off 6 oz. with the catheter. From 3 P.M. till 7 P.M. she rested well and was not given anything. At 7 P.M. a fit followed a few moments of restlessness. The fit over, twenty grains chloral were given, and she soon after became conscious. I then left a drachm to be used in the night if needed. From that time till July 31 she was at times quite comfortable, able to eat and urinate, and sleep well with a little morphine or chloral; but on two occasions she was threatened with convulsions, which were happily averted by prompt use of chloral. She was totally blind at times, at others could see faintly persons in the room, and on one occasion could see them well enough to name them. August 12, Prof. James Tyson saw her with me. He thought he could hear a decided bruit at the heart. She had passed twenty-eight ounces of slightly turbid urine, albuminous, and rich in phosphates, in the past twenty-two hours; she could see the furniture in the room. During the week she had taken quinine and iron twice daily, with whatever besides seemed indicated to relieve special symptoms or complaints. The jerking was absent now, though taking scarcely any morphine. Dr. Tyson after examination of the urine decided that she had Bright's disease, either large white or albuminous kidney. Among his suggestions was that of using potassium bromide, fifteen grains, three times daily, instead of morphine. It was given, but, as it made her sick and the jerking returned, we resumed the use of the latter when it seemed to be needed. She soon began to eat ravenously of chicken, mutton, beef, clams, milk, eggs, beans, potatoes, etc.,—would not be restrained; indeed, I did not feel like attempting to do it, for her appetite was strong, and I was not at all sure that the profession had agreed on any one kind of food being more valuable than all others. For many weeks she had had no œdema, and one-fourth grain of morphine sulph. would always quiet the jerking of the limbs. There was little change till August 28, save slight swelling of the legs. On that day she had epistaxis, became deathly pale and shrunken in face. The bleeding continued for several hours, until the blood was so pale that it could scarcely redden a white cloth; yet she sat in her chair all night, despite the entreaties of her friends that she lie in bed. The everyday details of the case would weary. Suffice it to say that until the day of her death she continued to alternate as before, but there was little sickness, no headache, often much de-

sire for food, mind quite clear; with twenty grains chloral good sleep; would often make water by her own efforts, but could not quite empty the bladder; and then followed frequent desire, requiring the use of the catheter, the urine then being offensive and containing much mucus. September 8, she sat up nearly all night, and was evidently dying. Voice had gradually failed during several days, and now she could speak only in whispers; dozed much, but not from medicine. September 9, dying, but still could answer questions, take drinks, etc., but would not lie down; no swelling save in feet and legs. She died sitting in her chair, at 8.30 P.M., September 10, 1875, about four years and four months from her confinement, and one year and six months after I was called to her. At all times, save when having convulsions and just prior to and subsequent to them, her mental condition was normal. But a short time prior to her death she dictated her will,—a most thoughtful document.

To me this case was a most humiliating one. While I doubtless gave much relief at times, I felt that over the steady march of the disease I had almost no control. I sought information as regards treatment from all available sources, but still felt that none of them gave much assurance of success.

Case II.—While in attendance on the above, I was called, February 10, 1874, to see her mother, Mary F., whom I had known for many years as the daughter of very healthy people and the wife of a well-to-do farmer in our limestone valley. She had had several children, four then living, and had been a very healthy, hard-working woman. She was robust in appearance, and had had but little sickness. I found her engaged in her domestic duties, but she was sallow and dull-looking. She told me she was getting blind; that about two years ago, finding her sight defective, she had gone to the Wills Hospital for advice and treatment, and that, after visiting there several months, and being treated by one of the physicians (sometimes at his private office), without an increase of vision, she quit taking medicine. From that time until I saw her, more than a year afterwards, her sight gradually failed, until she could not see to do her work, and on account of this increasing blindness she had sent for me.

As I had been in attendance on her daughter nearly a month, at her home a mile distant, and as in general appearance of the face, sallowness, and slight puffiness of the eyes, and as the daughter's case was one of pronounced Bright's disease, and as the physicians of the Wills Hospital had not been able to relieve the failing vision (possibly because they did not recognize the character of the

disease), I suspected that she was a victim to Bright's disease. An examination revealed low specific gravity of urine, copious deposit of albumen, slight swelling of legs, and dullness of intellect. There was no unusual appearance of her eyes, but she said there was a mist before them. I have no notes of her case, but I gave her—I will not say, "appropriate treatment"—such treatment as seemed to me indicated, and she went along without much change, except a gradually increasing anasarca and blindness until she could not recognize her friends. Three days before her death she fell into a coma which deepened into death without a convulsion on the 15th of March, only one month from the date of my first visit.

Case III.—Thomas F., the husband of the above, and the father of the first case, aged 60, a strong healthy man, descended from two healthy families, a farmer, was well until the spring of 1881, nearly six years after the death of his wife, and five years after the death of his daughter. At this time he had an attack of dumb ague—now called malarial fever—which confined him to bed for two weeks in November, 1880, and in December it recurred, and he had two weeks more in bed, under the care of a physician, before he could again resume work. From that time he complained of pain in his loins, loss of appetite, and a general malaise, which soon disqualified him for work; but he continued to oversee his large farm, and to the neighbors he did not seem to be a sick man, but they attributed his avoidance of work to the fact that he said his eyesight was failing very fast. In May of 1881 he went to a homœopathic doctor on account of increasing blindness and because the pain in the small of the back on both sides had much increased. He continued under his treatment until September 3, without relief or much aggravation of the disease. On that day, while in Norristown, where he had gone on business, his nose began to bleed at 3 P.M. and continued till dark. Began again next day at 4 P.M. and continued until next morning at six o'clock. After that day, which was just four weeks before his death, he bled now and then a very little after a hard coughing-spell, but not much, until the day before he died, when he began to bleed in the morning and it continued all day. He died next morning at seven o'clock. He was quite sensible all the time, and could see so as to recognize his family if standing very near to him.

Case IV.—After the death of the father, the farm was managed by the two sons. The younger was married, and 29 years of age. In the fall of 1880 he began to have a slight cough with mucous expectoration, which continued through the winter and on till the beginning of the next winter; but he was strong and worked actively on the farm. In December, 1881, he took cold and had a moderate

pneumonia. Dr. Newberry, his physician, has kindly furnished me with the following: "I treated him last January for pneumonia of a moderately severe form, which was the only time I ever treated him, except his last fatal attack. During the latter part of April, while attending one of his children, my attention was called to himself. He had an icterode appearance; a little puffiness under the eyelids; was rather constipated; appetite good, but with a languid, weak feeling; easily fatigued, drowsy, sleeping a good deal of the time, both by day and night. This drowsiness and languor he said he had suffered for some time. The urine was increased in quantity, was of a pale color, and a specific gravity of 1008, heavily loaded with albumen. It was not examined microscopically. These symptoms increased gradually, with slight intermissions of improvement of vision and hearing, for two or three months, when there supervened impairment of vision and hearing, with epistaxis; also a cough, with a mucopurulent, rather profuse expectoration. The appetite and the sleep were not good. There was a very troublesome itching—most troublesome on the face—occurred the week preceding death. There was frequent desire to urinate and difficulty in doing it, and during the last three days the catheter was needed. He had much twitching of the muscles, but no convulsions. The pulse varied much in frequency, but was at no time very rapid. There was not much effusion. The case was the most rapid one that ever came under my care, and I am really unable to assign any probable cause or to advance any theory for the occurrence of these cases in that family and in that locality."

To this account of Dr. Newberry I can now add the testimony of his stepmother, who resided in the house with him. She says, "After his attack of pneumonia, which had confined him to bed for two weeks, he recovered quite rapidly and worked until the very last of April, when he complained of an increase of the pain in his back or loins, which had troubled him since the attack of pneumonia. He was also occasionally sick at stomach, his eyes were failing him, he felt weak and weary, and could not work. Early in May he had bleeding from the nose for two hours, and it left him weak and pale. He had occasional light bleedings after that, and in four weeks from that time died in a convulsion which had lasted but a few minutes. He was totally blind during the last week, and had wandered a good deal in his mind during the previous week."

In Case III., as the urine was not examined, it may be asked, "Why do you speak of this as Bright's disease?" Its entire accord with the others in the early symptoms of pain in the back, loss of appetite, general malaise, and gradually-failing vision, and, later, the epistaxis, certainly justify me in putting it with

the others. That it would have gone on to blindness and convulsions but for the hemorrhage which brought on premature death, I have no doubt.

The family thus afflicted, in summer, used water for cooking and drinking from a well sixty feet deep, the bottom being limestone, while the whole depth was through the "drift" which covers our valley in some parts to a depth of one hundred and fifty, or more, feet.

In winter and fall—indeed, always when the weather was not warm—they used cistern-water, which was drained from the roof of a large house. This arose partly from the fact that the well-water was fifty or sixty yards away, while the cistern was at the door. The well-water was pure, cold, clear limestone-water. There is now so much dread of impure water causing disease, that it may be well to say that this family of most cleanly people in all that would be seen by a visitor was in the habit, for many years, of keeping a flock of pea-fowls and many pigeons. I was a great admirer of the flock of beautiful pea-fowls, and thought I would like to have them strutting about my large lawn, so I procured a pair and raised a few. I soon found that it was almost impossible to keep them from the top of the house, without penning them, where, if not at once driven off, they would soon leave heaps of droppings; and what surprised me was the great amount voided at once. It seemed to me almost equal in amount to that dropped by a calf of two or three months. I soon disposed of them; but this man continued to raise them. Seldom had he less than five, and often twice that number. As he never prohibited them from the roof of any of the buildings, they spent a great deal of time there. While writing this paper, I went over to see if they were still disporting themselves on the roof of the house. The family was away, but the hired girl appeared. After inquiring for Mrs. F., I referred to the beauty of the pea-fowls, remarked that they were troublesome things, and inquired if they went much on the top of the house. She said, "Oh, yes; but not so very often." I saw at once that it had not been a subject of conversation among them, and am convinced that, if it was not an every-day place for the fowls, it was where they spent much time. In addition to these,

they kept a large number of pigeons, birds which, when not in their boxes, are nearly always on the roofs of the house and barn. It is not uncommon in the country to see two or three dozen on a house- or barn-roof at one time. What must be the condition of cistern-water derived from such a roof? Some people think if water is cold it is pure. Would ice purify a pitcherful of this? Again, they kept a large dairy. The cows drank from a pond and from cisterns which were supplied with water from the roof of the large barn, on which the pigeons and pea-fowls so often congregated. In the very warm weather, too, the cows frequently waded into the pond and stayed there, as is their wont, for considerable time. Now, what effect would the use of such water have on the milk? Would it be deteriorated? I have thought much on this subject, and read a great deal on the importance of clean stables and clean cellars and the facility with which milk absorbs odors, yet am inclined to believe that there would come no harm to the *milk* though the cows had drunk of water from the reservoirs above named, though I confess I have sometimes been nauseated when thinking of the condition of the water in cisterns supplied by roofs where pigeons and pea-fowls daily congregate.

I know of no other family in the region that keeps pea-fowls, though pigeons are often quite plenty. Some farmers use much milk and pork as food, and they probably did. I have thought it well to mention these things.

These four cases strongly resembled each other in the condition of the urine, the pain around the back, across the loins and shooting to the neck, the gradual loss of vision, going on to total blindness, and the coma which preceded death. What is the cause of the coma and the blindness? I have read much on the subject, but confess that, so far as treatment is in question, I know nothing that is available after the grave symptoms have appeared.

Many physicians flippantly explain every symptom—especially coma, blindness, and convulsions—by saying it is uræmic poisoning. As I know nothing from examination, let me admit that the common teaching, that the urea which should be drained out of the blood by the kidneys is, on account of disease in the kidneys, *not* taken out. This urea, it is said,

will poison the brain. So it is said, too, in the woman with puerperal convulsions. The kidneys, then, must be affected in both alike. Christison has known the daily discharge of the solids of the urine to be reduced, for weeks together, to one-fourth the natural amount, without any head-symptoms. All the readers of these cases know what is written on the subject; let me rather say my own thoughts on it.

In every variety of the disease the cause seems the same: a congestion, then inflammation, of some part of the kidneys. In the early stage, Dr. Tyson's treatment—"cups (wet or dry), rest in bed, cathartics, etc., to allay inflammation"—is doubtless the best yet recommended. But there is a better than that. If there be congestion or inflammation of the kidneys, a single good bleeding from the arm will do more towards relieving the patient in five minutes than all other remedies in common use will do in as many days, and after that, cups, opium, etc., would greatly aid.

I have never had a case of Bright's disease until it was far advanced, and my treatment—the treatment of the books—has had no saving power. Hereafter I will forget all popular remedies, and forget the ridiculous name of the disease; I will inquire of the patient how his present condition differs from his healthy state, will examine his urine, and, should I find much albumen, I will believe, with Dr. Tyson, that inflammation, of some grade, is present in the kidneys.

I have had a good many cases of uræmic convulsions—so called—in women, just before labor, during labor, or soon after delivery. Some had been greatly anasarcaous, some not at all. More than twenty years ago I reported eight cases, which were all that had occurred in my practice, in nearly two thousand four hundred cases of labor. *Every one of them was freely bled, and every one recovered.* In one of these cases the urine was almost like dark blood during labor, and had been so for days before. She was, too, almost blind, but would not yield to being bled, till, when the convulsion occurred, she could no longer resist. Now, if these cases were caused by retained urea, the result of disease or inaction of the kidneys, and were saved from death by bleeding, may we not resort to it in Bright's disease? That is what I shall do, and follow it by Prof. Tyson's adjuvants. If they should

then fail, what next? Before we knew anything of Bright's disease we often met with the same disease, but when the anasarca was added to the other symptoms it was generally regarded as a "liver complaint," and there was a resort to calomel as a purgative, and, after it had acted well, it was followed by small doses of the same, with squill and nitrate of potassa, until ptyalism occurred, and then there was often marked improvement; and by keeping up the ptyalism moderately, by the use of the medicine now and then, cures were often effected. We knew nothing about albumen in the urine, or, if we had heard of it, did not regard it—as it is now regarded—as an evidence of an incurable disease. Many physicians are quite alarmed to see albumen in the urine, and are inclined to really give up the case as a serious case of Bright's disease, and yet we are told that there are several kinds, some more curable than others. I think our treatment years ago, when we did not regard the condition of the urine, but allayed irritation or inflammation of the system wherever it appeared, was more successful than the present treatment. Allow me to report the case of a neighbor, which has occupied great part of three years:

A farmer, 46 years of age, complained for several months of ailments not uncommon in the beginning of Bright's disease, and finally sent for a physician, who, finding his urine to be very albuminous, put him under the use of the various medicines recommended in that affection. Months passed; the limbs began to swell, the anasarca was over the whole body, the legs, shining and red to the knee, were freely punctured, the privates were swollen enormously, he was unable to lie in bed all night, but was compelled to sit up. All the usual remedies of the day were applied, but with only the effect of temporary relief at times, to be followed by aggravation of the symptoms. I had seen him often with his physician, and we faithfully tried the various vaunted remedies, but then, when he was in this deplorable condition, I remembered case upon case seen forty or fifty years ago, much like this, and I spoke to my *young* friend—the physician of twenty years' practice—about them, and proposed that we try the old plan. We had no hope from our present course, no friend of his had the least idea that he would ever recover, so we began to give in pills one grain of calomel, one of digitalis, and one of squill, three times a day, morphia and chloral, one or both, at night, to relieve oppression and induce sleep. Day

after day we went on for two weeks, before the breath announced that the system was affected by the calomel, and all this time there had been no perceptible change save an increase in quantity of urine. But then all the symptoms showed an amelioration. Soon the amount of urine was greatly increased, the oppression rapidly relieved, the swelling of every part of the body gradually lessened. The medicine was then used or omitted as seemed indicated. The object was to keep the system moderately under the influence of the mercury (what an awful word!), but not to push it to heavy salivation (another awful word!). From that time, every day showed an improvement—a rapid improvement—in the symptoms. He ate well, slept well without morphine or chloral, and for the past twelve months has been a well man.

Now, *that* is just what I will do for the first advanced case of Bright's disease that may come under my care.

CONSHOCKEN, MONTGOMERY CO., PA.

REPORT ON HYGIENE AND TOXICOLOGY.

BUTTER-SUBSTITUTES.

PUBLIC interest has been directed very much lately to food-adulteration, and especially to the sale of butter-substitutes and adulterated butter. Chemical analysis has not, as a rule, been very satisfactory in its application to the detection of the frauds. It is stated on good authority that, some years ago, the English government chemists passed as genuine a sample of butter which the vender afterwards acknowledged as fraudulent. Various general tests, such as the crystalline appearance, have been from time to time proposed, but the ingenuity of manufacturers has generally been sufficient to overcome these conditions and thus elude detection. More has been learned by the acknowledgments of manufacturers and dealers than by the investigations of experts, and there can now be no reasonable doubt that a large proportion of the articles sold as butter in the market are composed entirely or partly of other fats. The price paid for the substance and the business reputation are no guide. In one case that recently came to my knowledge, a family in this city were paying fifty-five cents a pound, under the impression that they were getting pure butter direct from a dairy; but on analysis the article was

found to be very largely colored lard. It did not seem to contain any butter.

The attempt to prevent fraud by compelling the dealers to place the names oleomargarine, suene, etc., on the tubs or packages is practically a failure. The name is usually put in some out-of-the-way place or printed in a circle or in fancy characters, so that it cannot be easily read.

It is fortunate that these articles are not injurious. They differ from true butter only in minor particulars, principally in not containing some of the compounds of the more volatile fat-acids. There is no evidence that these substances are essential ingredients, and consequently their absence cannot be a serious matter.

Some little sensation has recently been made by the statement that nitric acid is used in some of the manufacturing operations with these articles, but no reason can exist for any alarm on this point. Even very small amounts of this body would at once be indicated by the taste. It is evident that if this acid is employed in the manufacture, it is entirely removed before the article is exposed for sale.

The entire question is a commercial and not a sanitary one. When butter-substitutes are sold for butter, the consumer is cheated, but his health is not injured. To prohibit absolutely the manufacture of these articles would be to destroy an ingenious industry which is capable of giving to the poorer classes a good article of food. Legislation is only required to insure an honest sale of the substances.

TOXIC EFFECT OF ALCOHOL.

Dujardin-Beaumetz, at a recent meeting of the Paris Academy of Medicine, presented some notes on the toxic action of alcohol. The doses administered varied from one to two parts per thousand of the weight of the animal. Intense congestion of the intestinal mucous membrane was produced. Drunkenness was manifested by a strong tendency to sleep, trembling and feebleness in the limbs. The exact manner in which alcohol is disposed of in the economy is difficult to make out. Dujardin-Beaumetz thinks that the result differs with the amount taken. When taken in very small doses it is transformed into acetic acid and combines with the basic substances in the blood; in larger doses the acetic acid is formed in the lungs by oxidation; in still larger doses it takes

oxygen from the blood-corpuscles as well as the lungs.

HONEY-ADULTERATIONS.

Otto Huebner, a well-known English authority on food-adulteration, has been giving some attention to honey-adulteration. He finds that, as might be expected, adulteration is practised, glucose being used sometimes in a not very pure condition.

USE OF NICKEL-PLATED CULINARY VESSELS.

Birnbaum (*Dingl. Polyt. J.*, 249, page 515) records some observations as to the effect of organic acids (such as would occur in food) on culinary vessels made of nickel-plated iron, which have recently been brought into market. Some experiments by a former observer are recorded as favorable to the use of these vessels, but Birnbaum found that under certain conditions considerable metal is dissolved, so that the nickel coating, which is thin, will be somewhat eaten through. It has not yet been decided how intense is the toxic action of nickel, but it seems that such vessels should be used with caution, and especially not employed for the preparation of hot or acid foods, or used for keeping food for any considerable time.

H. L.

TRANSLATIONS.

ANTISEPTIC INTRAVENOUS MEDICATION.

—M. Van der Heyden recently reported to the Society of Physicians at Batavia his results obtained by the treatment of certain infectious diseases by the intravenous injection of iodine. His solution consisted of two parts of sodium iodide, one part of iodine, and seven parts of water. The amount injected was estimated at fifteen to twenty milligrammes of iodine to each kilogramme of body-weight. The patient was a Japanese. The injections were made into the median vein, at the bend of the elbow: the results were not very satisfactory or conclusive.—*Wiener Med. Wochenschrift*, 1884, No. 1.

M. Hoffman (*Archiv für Experimentelle Path. und Pharm.*), having made intravenous injections of quinine hydrochlorate, under most careful antiseptic precautions, reports cases which demonstrate the value of this method as an efficient anti-

pyretic, when carefully followed, in cases where immediate results are required. It was employed in cases of typhoid fever, erysipelas, pyæmia, pneumonia, and pulmonary phthisis, but the effects were scarcely so superior to those obtained by ordinary methods of administration as to warrant the additional risks of phlebitis, gangrene, or embolism.

HYPODERMIC USE OF KAIRINE AS AN ANTIPYRETIC.—Dr. Queirolo (*Gazz. degli Ospitali*, No. 101) undertook a series of observations to determine the effects of kairine when given hypodermically. He found that injections of from ten to fifty centigrammes produced neither general nor local troubles. Perspiration was sometimes checked, sometimes not. Reduction of the temperature, however, was occasioned, the fall commencing rapidly, attaining its maximum in two hours, and gradually disappearing at the end of five hours. Pulse diminished with the temperature. He concludes:

1. Kairine by hypodermic injection produces a lowering of the temperature more rapid, more enduring, and more marked than when taken by the mouth.

2. In order to produce this fall in temperature, the hypodermic method does not require such large or such frequent doses as by the ordinary methods.

3. The hypodermic injection of kairine is exempt from all inconveniences and all local accidents. Kairine is soluble in warm water, and may be given in doses of from one to fifteen grains (.06 to 1 g.) *Bull. Générale de Thérapeutique*, March 30.

APPARATUS FOR LIFTING PATIENTS FROM THE BED.—In the *Centralblatt für Chirurgie* (No. 14), Dr. Hase, of Hanover, publishes an account of an apparatus which is apparently efficient, durable, and easy of operation. It consists of an iron frame, two uprights, and a transverse; from the horizontal piece depends a movable horizontal bar, which is elevated or lowered by a cord at each end, which, after passing over pulleys, are wound up by a winch at the head of the bed. The patient's body is sustained by four broad bands, which are attached by curved steel rods to the horizontal bar; there is also a small padded one under the patient's neck. For convenience, efficiency, and comfort, this apparatus seems especially commendable.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 3, 1884.

EDITORIAL.

MEETING OF THE AMERICAN
MEDICAL ASSOCIATION.

EVERYTHING indicates that the Thirty-fifth Annual Meeting of the American Medical Association, which will convene in Washington next Tuesday, will be both large and interesting. The announcements made by officers of several of the Sections promise that the scientific part of the proceedings will be more than usually valuable, while there are many indications that the administrative portion will contribute not a little to the importance of the session.

Among the subjects which will come up for discussion will doubtless be the incorporation of the Association, in order to give it a legal existence. This step is almost rendered a necessity by the enterprise undertaken last year of the publication of the proceedings in the form of a weekly journal. It is unreasonable to expect that the gentlemen composing the board of trustees will be willing to continue individually responsible for pecuniary obligations which may be incurred on behalf of the Journal, and personally liable in suits for damages in case of reflections upon the character of any one which might by inadvertence appear in its columns. Nor can the trustees be expected to advance money to keep the Journal going, should the funds in the hands of the treasurer run short. It would seem, therefore, essential that the Association be incorporated by act of Congress at as early a date as possible, in order that it may be able to make contracts and assume its own obligations.

It is generally understood that the an-

nual income is not sufficient to pay the expenses of the Journal of the Association in its present form, although both the editor and permanent secretary have given their services gratuitously during the past year. Under such circumstances, the trustees will probably advise some change in the management of the Journal, as it is unjust to ask these officers to give their time and labor to the Association without any compensation whatever. We would suggest that, if published in the form of a monthly bulletin of State medicine and medical jurisprudence, the organ of the Association would cost less money, and, at the same time, it would occupy a field for which it is particularly adapted. In such a shape it might serve a useful purpose and be of real value to the profession.

This meeting would also afford a fitting opportunity to appoint a committee to report at the next meeting upon the membership of the Association and its methods of administration. There is a growing conviction in the minds of many of its members that some changes might be made with advantage. In the first place, the membership should be made more general,—at least, all the members of State medical societies should be made active members of the National Association; the absurd restriction (which, by the way, is always disregarded except upon a call of the yeas and nays) prohibiting permanent members from voting should be abolished; the time for discrimination between new and old members has ceased, if it ever had any real cause for existence. This change should have been made at the time when the right of sending delegates was taken away from the colleges.

Another change which would be beneficial would be to improve the *personnel* of the several Sections; every member upon registering should indicate which Section he desires to be a member of: such an arrangement would not prevent his

visiting other Sections, but it would have the decided advantage of giving each Section a regular membership, which could decide questions referred to it, and *which could elect its own officers for the succeeding meeting*. The method now prevailing of the practical appointment of the officers of Sections by the Nominating Committee is unsatisfactory, and is a power which has been abused.

A committee, we hope, will be appointed at this meeting, consisting of distinguished members of the profession who are not connected at present with medical teaching, which shall present a report at the next meeting upon Medical Education in the United States, and what steps, if any, this Association should take in relation thereto, taking for its model the report of the committee of 1848, contained in the second volume of the Transactions of the Association.

Although the American Medical Association is in some respects open to criticism, and has not succeeded in accomplishing all the reforms that were considered so desirable when it was organized, yet, as stated by Dr. J. L. Atlee in his Presidential address, if it had done nothing more than to create an *esprit de corps* and the present kindly relations among the members of the profession, it would have more than justified its own existence and given a good reason for its continuance.

ON THE ETIOLOGICAL RELATIONS OF ZYMOTIC DISEASES.

IN a lecture recently delivered by Dr. De Gorrequer Griffith, of London, on "the unity of poison in diseases usually considered to be separate and entirely distinct, and of many diseases seemingly all different, from one unity of common origin," the view is expressed that specific differences in diseases are not entirely explained by their causes. Cases are cited in illustration, where diphtheria and scarlatina

were associated, the diphtheria appearing as a sequel or complication of the scarlatina, and spreading among a certain number of persons as diphtheria, then to be transformed into some other disease; or reappear as scarlatina; or, perhaps, leap forward and cause to be evolved, in a certain number of cases, very ulterior sequelæ of scarlatina, such as rheumatism, or heart and pericardial affections, or, it may be, nephritis (the scarlatinal form), without any intermediate symptoms being noticed, or any pre-existing warnings being detected, or such, indeed, having been either noticeable or detectable. Such a form of nephritis, in turn, might prove infective, inasmuch as it would have the power to set up scarlatina, or diphtheria, or any other ailment or group of symptoms coming within the range of its infectivity. In this way new sets of symptoms may be evolved, new outward manifestations of the inward workings or evolution, —a new disease, in fact, as would be said in current medical phraseology. In support of this position Dr. Griffith quotes the Bradshawe Lecture of Sir James Paget, and his and Sir William Gull's addresses on "Collective Investigation of Disease." It must not be inferred, however, that the poison must be always the same, but that the one *origo mali*, whatever it might be, may originate several poisons giving rise to so-called different affections, under different conditions.

The germ theory of disease depends for its foundation upon the hypothesis that each zymotic disease, and some which have not hitherto been included in this category, are due to the introduction into the system of peculiar living micro-organisms, which, by their development, give rise to certain mechanical and chemical effects, which are regarded as the sole and efficient causes of the groups of symptoms and tissue-changes constituting the particular general or local communicable disease, and the myriads of contagious elements

produced during its progress are regarded as lineal descendants of those which initiated the morbid symptoms. Under such circumstances, the study of the development of the microbe becomes all-important. If further investigation shall succeed in showing that there is no generic difference between the micro-organisms appearing in the course of one disease and others found in the second, but of a different kind, and that they are all specifically related, and may arise indifferently from the same source under changed conditions, then the germ theory will have to be abandoned; for the many observations upon the presence of micro-organisms in diseases establish nothing beyond their co-existence, and do not demonstrate a relation of cause and effect. The constant presence of microbes in the mouth and intestinal tract in health suggests the question as to their possible connection with similar organisms found in diseased conditions. Dr. Miller, of Berlin,* has made some experiments upon fermentation in the human mouth, and its relation to caries in the teeth, that are very interesting. He found, in his cultures, that the microscope revealed the constant presence of a fungus, chiefly in the form of diplococci, either single or in chains, less often in form of bacteria, bacilli, or even threads. Sometimes all these forms are found on a single thread. He states that "the particular form in which the fungus occurs depends somewhat upon the culture-medium, as well as upon the age of the culture." This confirms the statement of Bastian, that the rapidity of growth affects not only the size but the form of bacteria. The experiments of Zweifel, made a year ago, appeared to demonstrate conclusively (1) the existence in normal blood of spores; (2) the possibility, by deprivation of oxygen, of the development of these spores into bacilli; (3) the production of septic poisoning by these bacilli when in-

jected into the peritoneal cavity of animals. The more recent culture-experiments of Pasteur with the micrococcus of chicken-cholera seem finally to establish the fact that specific virulence is an accidental or acquired property, since, by cultivation, micro-organisms can be obtained which are not noxious or infective. The question remains to be decided from whence this power of specific infection is derived, and what are the conditions governing its development and mode of communication. The evidence that bacteria are the active and sole agents in the causation of disease is, to say the least, still imperfect.

RESIGNATION OF PROFESSOR ALFRED STILLÉ.

IN his farewell address to his students, delivered April 10, Prof. Stillé, looking back over his twenty years' professorial life for inspiration, recalled the principles which had governed his whole course of life and methods of teaching. With a master-hand he indicated the shoals and quicksands that beset the path of medical science, and proclaimed his reliance upon clinical experience as the only safe guide for the student of medicine. He reminded his hearers of the great truth that medical art has a far higher range and aim than the prescription of drugs, or even of food and hygienic means, and that when neither of these avails to ward off the fatal ending, it is still no small portion of the physician's art to rid his patient's path of thorns, if he cannot make it bloom with roses. With regard to medical education, the orator alluded to adequate preparation as essential for the study of medicine, and insisted upon the necessity of a preliminary examination. He also urged the need of a broad education and higher attainments by medical men. He claimed that the art of medicine is founded upon experience alone, and that art must ever precede science as the normal method of develop-

* Quoted in the *Independent Practitioner*.

ment. To win success in life, he said, only two things are essential: to live up-rightly, and be wisely industrious. He also spoke some earnest words in defence of a Code of medical ethics, and, in conclusion, bade those who heard him to love mankind, to love their profession, and above all to love truth.

We regret not being able to republish this thoughtful address in full. A contribution such as this, from a master of our art, a consummate practitioner, an experienced teacher, and a writer distinguished for erudition, soundness of judgment, and elegance of style, is a most noteworthy event and one that claims serious attention.

This farewell address is an ending worthy of the whole course of the teacher. With the words of this eminent man still in our ears, we ask, Who is there among us all who is worthy to take up the work which he has, after years of faithful service, just laid down? We can only pray that he upon whom his mantle may fall may have a double share of his spirit. Although his voice may be heard from the rostrum no more, and his accustomed place be empty, yet his teachings will not be forgotten: in the noble words of Tacitus, "*Non hoc supremum munus amicorum est, prosequi defunctum ignavi fletu, sed, quæ voluerit, meminisse; quæ mandaverit exsequi.*"

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

IN the spring certain lectures are delivered before the Royal College of Physicians of London, and this year the lecturers are an unusually strong team. The Gulstonian Lectures were delivered by Dr. Clifford Allbutt, of Leeds, who chose for his topic "Neuroses of the Viscera;" the Croonian Lectures, by Dr. Hughlings Jackson, who selected for his theme "The Evolution and Dissolution of the Nervous System;" while the Lumleian Lectures fell to Dr. James Andrew, who adopted for his subject "The Etiology of

Phthisis." Each man had something to say worth hearing, beyond doubt. Dr. Allbutt's lectures best admit of being abstracted, and are interesting as the outcomes of a mind strongly inclined to think for itself and to proceed along its own lines. He thinks neuroses above the belt are far more clearly understood than those below, consequently he kept clearly below the belt. It appears that in his note-book but a small space is filled by "dyspepsia," a fact which strikes himself. "The cases of dyspepsia are a mere handful; 'martyrs to dyspepsia' are to be found," he admits, "at every street-corner, and are said to form something little less than the staple of those who drift from consultant to consultant." So they are; and, considering how little good they get from many consultants, they may well form a nomadic race, going about hoping to get some help somewhere. He has had his share of these sufferers; and it appears he is pitiful over the stomach, "that long-suffering organ, and its work,—of the greediness or recklessness which make it the receptacle of all sorts of rubbish." Then he turns to the journals of the day, and reads of talented men palsied by dyspepsia. He finds "every large drug-store has its pepsins, its dinner-pills, its cordial-bitters, testifying not only to the general but to the medical cry for help against the demon of dyspepsia." Yet, he asks, "how are we to explain this catholic wailing over a disease which is not? this wealth of balsams for sufferings which cannot be named?" He adds, "It is almost trivial to remark that dyspepsia, strictly speaking, is not a disease, but a symptom; it names not the causes nor the processes of the evil, but its consequences; that, as an outcome of the affair, whatever it may be, food is not digested, or is digested imperfectly or painfully. Taken in this sense, no doubt dyspepsia is an exceedingly common complaint." It is like lameness, which may depend on a multitude of causes, but, as he shrewdly remarks, we would scarcely speak of a person when lame as suffering from "dyskinesia." He proposes to divide dyspeptics into four chief groups. "First, those which are due to grave disease of the stomach itself, such as cancer or ulcer of the organ, dilatations of it, atrophy of its coats, etc.; secondly, to diseases of the stomach less grave, but still local, such as the simpler catarrhs, acute and chronic gastritis; thirdly, disorders which depend upon no visible change in the structure of the stomach [now, surely the illustrious lecturer does not wish us to understand that he examines the stomach with the eye by means of an endoscope?], but consist in some disorder of its work or secretions, and which, in accordance with a convenient use of the word, we call functional: the dyspepsia of gout may perhaps be taken as an instance of this group; fourthly, disorders which depend not upon any pri-

mary derangement of the tissues of the stomach, but upon some influence coming from blood or nerve, from which visible local changes may or may not ensue." He thinks a great many disorders of the stomach may be neural, and not strictly gastric affections. In other words, persons of the neural temperament are liable to gastric disturbances; a matter on which there can be no doubt in any mind. That some acute exciting cause may set up the malady he no more denies; that "the touch of a bronchial attack, or of an acute pneumonia, may first reveal an asthma till that moment wholly latent,—latent it may be till middle or even after life, or latent, like the unwept tear, forever. But the sleeping ill, once awakened, rarely recedes again altogether, but, by its own recurrence, tends to rivet upon the sufferer the chains of habit." He then alluded to disorders of digestion dependent upon general nervous exhaustion. Maybe the whole man is run down, and the stomach shares in the general atony. And with this he contrasts the case where the look is that of depression, the complexion muddy, the urine charged with lithates, while the patient "is weary and dull and says he feels like a dead dog of a morning." He then comments, "Why, of the two overworked men, nervous exhaustion should produce in one a simple atony of the stomach, and in the other an aberrancy, I cannot say. I suspect that the latter man has in himself some echo of gout: but yet I know how disappointing are all attempts to clean his tongue and set his stomach aright with the stock rhubarb and soda mixtures, with pep-sins, with calomel, colocynth, or colchicum, and how that even strong tonics, such as quinine and iron, may be prescribed with benefit; and how rest and upland air will beat all medicines whatever and will clean the tongue in a fortnight. Dyspepsia here is a symptom, and the stomach is disordered; but radically the state is a neurosis,—vascular or other,—and curable only on this understanding." Sensible talk, this. Then he refers to uterine neuroses, and comes down on gynæcologists rather severely. He thinks that "men and women are variously organized in respect to resistance to pain, and their fortitude or despair must be tested, not by their cries, but by the other features of their character," and "women, speaking generally, feel pain more than men do: patient as they are, they seem to have less reserve of force and less resistance, more susceptibility and resentment, less capacity." And here again I think our general experience is with him. As regards uterine neuroses, "a neuralgic woman seems thus to be peculiarly unfortunate. However bitter and repeatedly may be her visceral neuralgias, she is either told she is hysterical, or that it is all uterus. In the first case, she is comparatively fortunate,

for she is only slighted; in the second case, she is entangled in the net of the gynæcologist, who finds her uterus, like her nose, is a little on one side; or, again, like that organ, it is running a little, or it is as flabby as her biceps, so that the unhappy viscus is impaled on a stem, or perched upon a prop, or is painted with carbolic acid every week in the year, except during the long vacation, when the gynæcologist is grouse-shooting, or salmon-catching, or leading the fashion in the Upper Engadine. Her mind thus fastened to a more or less nasty mystery becomes newly apprehensive and physically introspective, and the morbid chains are riveted more strongly than ever. Arraign the uterus, and you fix in the woman the arrow of hypochondria, it may be, for life." He then "goes for" the gynæcologists again, hinting their "ignorance of neuropathics and of the neurotic diathesis," not forgetting to acknowledge that, after all, a debt is due to them. His attitude has given great offence among this section of the profession, and probably they felt the sting of his remark about their too exclusive attention to the uterus to the neglect of studying the diathesis. He goes on, "Take a hysterical person, man or woman, in its common and, so far, proper sense; take it to mean a person of feeble purpose, of limited reason, of foolish impulses, of wanton humors, of irregular or depraved appetites, of indefinite and inconsistent complaints, seeing things as they are not, often fat and lazy, always selfish; or, to take it in a less degree, one capricious, listless, wistful, attractive perhaps, yet having always the chief notes of hysteria,—selfishness and feebleness of purpose; and if such person complain of globus, of palpitation which is never perceived by the stethoscope, of sleeplessness of which the nurse has no record, of dyspepsia which does not lessen the labors of the cook, of pains which never flush the cheek, and if such person have, or have had, anæsthesia, unreal epilepsy, unreal palsy, unreal cramps, then set down such person as hysterical; but forget not, nevertheless, to cure her mind and body. Such a patient is, no doubt, a member, a degenerate member, of the neurotic family; but it is almost with indignation that I repudiate the application of her adjective to the nervous sufferer whom we may call the neuralgic member of that group. Why, gentlemen, my neurotic patients, if I can indicate them by a name, are almost the best people in the world."

The following sketch of a neurotic (built up from scores, he tells me) is so brilliant that I give it entire, without mutilation: "His entry into your room tells of him at once. He enters with a brisk step and a quick, observant eye. You see a slightly-built, meagre man, of sallow complexion, or, if colored, with the color painted high up on the cheek-

bone; the cheeks and the temples hollow, the temporal arteries being visible under the lean skin, which often shows tanned markings, deepened during attacks of pain; the hair is straight, fine, and sparse along the scalp; the features are sharp, often prominent; the lips thin, and the skin dry, with, it may be, some remnants of eczema about the ears or chin. The tongue is protruded and retired quickly, and is generally narrow and pointed; it is rarely indurated, and its tip, even when the health is best, does not cease to be red. There is often a light, silvery coating upon the dorsum and midline. The bodily frame is lightly and often finely built, the bony fingers and wrists and visible sinews and radials betraying the absence of fat. Here and there, in later life, a knotty knuckle may tell of gouty parentage. The pulse, when most tranquil, usually ranges between 70 and 80, and accelerates on the least excitement. The clavicles and ribs, in like manner, are prominent, and the heart's apex may be seen to beat sharply before the eye. The systole to the ear is likewise short and sharp, and the second sound very audible over a wide area. The limbs are small, but often very sinewy; such persons are as active as birds, and the absence of fat in their muscles often gives to them, in states of health, the quality of hardness under the hand. Their conversation, again, is lively and voluble, often keen and brilliant, but impressionable rather than imaginative. Usually such a patient does not readily come to you; he is brought half reluctantly by his wife or friend; he says, apologetically, he is an old dyspeptic and you can do him no good, he has visited all the springs and half the doctors in Europe, and he lays a bundle of old prescriptions upon your desk. Once agate, however, his story will be a long and minute one, but never maundering, wandering, nor whining. His companion will tell you that he is subject to great fluctuations of the animal spirits,—gay and fascinating in society, brisk, orderly, and thorough in business, but at home dejected and fretful. He is a small eater, a light sleeper, a worn worker. These persons are the heirs of every true neurosis, from insanity to toothache; and on the whole, when we consider the infinite perturbations of intermarriages, it is surprising how true they run, or how clearly you may detect the neurotic strain in mixed descendants. Of their visceral neuroses I shall speak hereafter, and would only say now that in both sexes of them migranitic stomach-ache and windy colic are frequent and imminent and receive the name of dyspepsia; and in the women are added to these uterine and ovarian neuralgias and hyperæsthesias. To call these suffering women of the neurotic type hysterical, is to confuse all the due acceptance of names, and, what is worse still, to confuse the real relations of things. The neurotic woman is sen-

sitive, zealous, managing, self-forgetful, wearing herself for others; the hysteric, whether languid or impulsive, is purposeless, introspective, and selfish. In the one is defect of endurance, but in the other defect of the higher gifts and dominion of mind." Dr. Allbutt here draws a clear, distinct line between neurotics, for whom he has clearly a kindly feeling, and the hysterics, whom he as clearly dislikes. It is a distinction which clearly ought to be more generally made, as it is most unfair to call a "neurotic" woman "hysterical." Further, upon such a correct distinction rests the line of treatment to be pursued.

Another matter about Dr. Allbutt's lectures dear to me is the full recognition of the individual as compared to the mere recognition of the malady. There is "the patient" as well as "the disease." I have incurred odium by my persistent reiteration that in the present scheme of medical teaching the disease is everything and the individual little,—at least in the eyes of the physician and the gynæcologist, though the surgeon does discriminate between healthy persons and those of strumous diathesis. He proceeds to speak of special maladies in neurotics, saying, "Such changes or such settlements of perverted action are often, no doubt, called to this spot or the other by some local deviation from the normal, as consumption may take its beginning from some trivial or forgotten catarrh; but the essence of the malady is not there, and to try to cure such a malady by local means is as wise as to try to cure a syphilis by antiseptic dressing of its ulcers. Such subsidiary means are often needed, often, indeed, necessary, but in cases like those under discussion should be used as little as possible, because of the tendency of such methods to arouse and perpetuate a morbid possession of mind in the woman. All this our more robust, clear-sighted, and more upright gynæcologists know well enough; in the rest the fault may lie rather with modern fashion than with themselves. Looking only to the uterine organs, their reason bounded by the confines of the pelvis, they attempt to stem the tides of general and diathetic maladies with little Mrs. Partington mops of cotton-wool on the ends of little sticks. That many of the cases need a judicious combination of local with general treatment is true, but in most of them the patient and the doctor are fascinated by the local phenomena, while nature herself is performing on a far larger scale. If we are to cure the disease, we must be able to fly with her and to run with her as well as to creep with her. In my later chapters, I shall recall the truth which should be ever before us,—that the fundamental difficulty in all neurotics, not hysterics, is their nutrition. More fresh air, without expenditure of the slender store of strength; the permeation of their starved tissues with the

fat which they themselves so often loathe in their food,—these two reforms accomplished, all their organs will take on a more generous and more vigorous life, all their tissues will brace and cleanse themselves, from a purer and richer flow of blood, and force will be stored up and energy developed, where before all was dilapidation and sterility. As a shrewd old Yorkshire doctor once said to me, 'It's no use, my lad, putting the hands right upon the clock-face if you have not cleaned the works.' Gentlemen, we are all one-sided. I speak to-day from my own one-sidedness, and my convictions are upon the side of cleaning and repairing the clock."

Such, then, are the hard-headed conclusions which experience has driven into a robust mind. The lecturer, in concluding, gave a series of cases from his note-book illustrating what he had laid down as general propositions. In speaking of vomiting which is neurosal, he delivers himself as follows: "It is enough to make one's blood boil to hear of a poor girl, wasted to a shadow by such a distress, treated, almost with gibes, as hysterical, when she is the subject of a malady as real as the doctor's own toothache, which, in turn, might vanish, by the way, the moment he should find himself on the dentist's door-step." Such neurosal vomiting is often, he thinks, put down as gastric ulcer; and, further, he thinks such gastric neuroses common about the catamenial periods. He thinks there is the irritable stomach just as there is the irritable uterus and the irritable spine. Here there is anorexia nervosa, because pain follows food in the hyperæsthetic stomach. In one place gastralgia took the place of cranial neuralgia, and no stomach-remedies did any good, but the case got well on Easton's Syrup. He also is inclined to regard the peculiar enteric noises known as borborygmi as neurotic in origin. They are found where there is abdominal breathing. He concludes with references to enteralgia, or abdominal neuralgia, a form of pain often mistaken for totally different pains; they are distinguished by their rhythmic recurrence;—then to renal neuralgia, of which he gave some most interesting cases; and, finally, he insisted, "Although the basis of all therapeutics must be a clear diagnosis, yet, on the other hand, the most elaborate diagnoses are but laborious idleness if not made the means of cure."

There is a healthy tone about Dr. Allbutt's lectures which is most acceptable to me. The lectures are well worth perusal, and will, no doubt, soon be published in a separate form.

J. MILNER FOTHERGILL.

DINNER TO PROF. ALFRED STILLÉ.—It is proposed to give to Prof. Stillé a public dinner in honor of his retirement from his active duties of the chair of Practice of Medicine at the University of Pennsylvania.

BOSTON.

IT is with a feeling of gratitude that the medical fraternity of our country will read of the bequest of the late Dr. Calvin Ellis to the Medical School of Harvard University,—this aid that he has left to us being the most fitting, *living*, useful monument of a life devoted to the higher standard of medical knowledge: this provision tending to make the School independent of the tuition of its students, and taking from it that competition and struggle for life that are so prejudicial to the advancement of any higher education. As residuary legatee it will receive a sum not far from one hundred and fifty thousand dollars, the income of which, deducting five per cent. (which is to be added to the principal), is to be used to pay the salary of a professor of pathological anatomy, provided that the income from this and all sources for that chair shall not exceed five thousand dollars. In case a part or the whole of it should not be needed for this purpose, it is to be applied, under the same restrictions, to pay the salary of the professor of physiology; and should this chair be provided for, then the salary of the professor of anatomy is to be paid from it. Should the income still be unexpended, it is to be used for such other purposes in the Medical School as the President and Fellows shall deem most useful. With Dr. Ellis's name the future successes of the School are ever to be associated. Nor is it alone here that the influence of this bequest will be felt; for others, both professional and non-professional, when they are considering where money is to do useful work, will emulate his example.

Another fitting memorial of past medical skill and a life full of devotion to the profession, his patients, and the poor, is the new ward at the Massachusetts General Hospital, named after Dr. George H. Gay, who was for so many years one of the surgeons of the hospital,—the Gay ward. The building, which is to be used for the out-patient department of the hospital, was given by a wealthy friend of Dr. Gay's, who considered that by such a testimonial to professional fidelity one could best show his appreciation of it. In plain view, then, of the old buildings of the hospital, where so many hours of professional life were spent, is this monument, which will be a source of help to the needy and a grateful tribute to a life well spent.

With its first annual report a new charity—The West End Nursery Society—has demonstrated its usefulness and right to appeal to the public for help. Its aims are—

1. The cure of disease or alleviation of suffering in children under two years of age.
2. The prevention of suffering and disease by teaching to mothers the proper care of infants, especially as regards artificial feeding.

The attending physicians are Dr. H. C. Haven and Dr. T. M. Rotch, experienced men

who are devoting their time to the care and cure of children; under their supervision the Nursery has been found to fill a want long felt among us, for in no way could preventive medicine be better advanced than by following out the second of the objects of the Society. One would naturally ask why, in a city provided with a hospital exclusively for children, should such a charity be needed? As the Children's Hospital admits only those over two years of age, the surgical and medical care of infants is not provided for. A few well-disposed and charitable people, having been convinced of its usefulness, supported the experiment from its establishment in 1881; but, the expenses having increased with the demand for aid, and its charity trust fund proving inadequate, in order to continue its work it asks for the assistance of others.

Every one, realizing the great evils arising from the baby-farming system (which city government is unable to remedy), and knowing that this abuse is due not so much to wilful neglect as to ignorance in respect to the proper food and care that infants should receive, must wish well for such an enterprise and trust that its usefulness may not be checked from want of timely assistance. From the physicians' report we learn that the mortality has been 20.5 per cent. Now, when we consider that wet-nurses could not be afforded, and that the mortality is sixty to eighty per cent. among the same classes from whom the inmates of the Nursery come, the results can be considered very gratifying to those who have undertaken the work.

Fama is about, and this time it is a medical department for Tufts College (the Universalist college at Medford, four miles from the city). The school, if report is correct, is to be located in Boston, in order that clinical advantages may be furnished. One can hardly be pleased at the report, as the chances for a new school here are not of the best, and the demand for a cheaper course of instruction in our city is not felt to be a need, as well as the fact that the established schools are, as yet, able to accommodate those who may desire a medical education.

The results of the Tewksbury Investigation are felt in some of the courses at the Medical School, making it somewhat more difficult to obtain material for demonstration and practical work.

The emergency "craze" is in full force in our city. It seems to be quite the fashion, and during the winter and spring a number of courses have been given. The plan adopted has been to give enough pay-courses to defray the expense of free courses to the firemen and policemen. The police commissioners have become interested in the matter, and by their aid a sufficient number of men in each district have been induced to begin the course, and, once begun, their interest and evident benefit to themselves have

made them good attendants and listeners throughout. The lectures in each course have been five in number, going over the usual ground, as recommended by Esmarch,—that is, something of the anatomy and physiology, especial reference being given to emergencies. Among the special topics considered are the early treatment of hemorrhage, wounds, sprains, and fractures, calling attention to the various extemporaneous means; what should be done in case of drowning or suffocation, treatment of burns, scalds, frost-bites, poison-bites, methods of transportation, triangular bandaging as being both sufficient and always at hand, first aid to those suffering from shock or collapse and heat-stroke, to those stunned, to the apoplectic, inebriated, epileptic, and fainting or suffering from the action of poison.

That the course will show practical good cannot be doubted, when we all know how often injudicious aid has been given,—a case recently occurring where a simple fracture of the leg was changed to a compound, due to lack of a little knowledge of what a fracture was and how it could be temporarily prepared for transportation so as not to increase the dangers of the accident. Then there is much to be said as to what should not be done. Some physicians complain that a man is giving away gratis the knowledge of the profession; but such, it seems to me, is not the case. For, after listening to a course of lectures on the subject, they, for the most part, are convinced of the advantage of early assistance of skilled hands, and, knowing enough not to complicate matters by attempting what they cannot do, are contented to await the arrival of the physician. There is as much advantage in correcting false notions as to the treatment of injuries (as that cobwebs, styptics, etc., are not only uncalled for in the treatment of wounds, but that they actually do harm) as there is in the instruction of the proper aid that may be given.

It is with deep feelings of sympathy that the profession throughout the country will learn of the sad necessity that has come upon Dr. Whittemore, who for several years has been superintendent of the Massachusetts General Hospital. Some time ago, an ulcer was caused in the palm of his right hand, supposed, at the time, to be due to blood-poisoning. This gradually increased, although the most approved methods of treatment were tried for relief and cure. Soon ulcers also appeared on the index and middle fingers of the left hand. These, also, were equally unaffected by treatment. After having consulted home authority, Dr. W., early in the winter, went to Europe for advice, with the same result, that there was no hope to be held out from any line of treatment,—the opinion being that the ulcers were of the nature of epithelioma of the skin. Having returned home without hope, except from oper-

ation, the conclusion arrived at was that amputation of the right hand and the two fingers of the left hand was necessary. This was done early this week by Dr. R. M. Hodges, at the hospital. Since the operation his condition has been quite comfortable.

The hospital staff is changed somewhat, Drs. E. N. Whittier and W. L. Richardson joining the corps of visiting physicians, filling the vacancies made by the death of Dr. Calvin Ellis and the resignation of Dr. Shaw.

At the City Hospital a change is contemplated. Dr. William Ingalls, for so many years one of the visiting surgeons at the hospital, is expected to resign, his place to be taken by Dr. William P. Bolles, the senior surgeon to the out-patient department.

RELIX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 13, 1884.

The President, Dr. TYSON, in the chair.

DR. J. H. MUSSEY presented a series of specimens illustrative of hepatic pathology. (This paper will be shortly published in another form.)

Dr. C. B. NANCREDÉ presented a penknife-blade, with the portion of bone transfixed by it, removed from the cranium of a boy aged 19 years, where it had remained undiscovered for over six weeks. Owing to later developments, the history of this specimen is also, for the present, withheld from publication.

THURSDAY EVENING, MARCH 27, 1884.

VICE-PRESIDENT E. O. SHAKESPEARE in the chair.

Case of epithelioma of the stomach and colon, presenting singular difficulty of diagnosis. Presented by Dr. J. H. PACKARD.

Dr. PACKARD stated that this case was placed at his disposal for report by Dr. H. M. Fisher, in whose wards at the Episcopal Hospital the man had been. Alexander R., æt. 49, single, was admitted July 9, 1883. He had for about four months been unable to follow his occupation, that of a wagon-driver. No history of syphilis; none of his family are known to have had cancer. His first symptom was discomfort after eating; later he had loss of appetite and pain in the stomach. Two months afterwards he felt a hard, tender mass in his belly, on the right of the umbilicus. On admission, the tumor seemed about the size of an orange, and was found to be on the left of the umbilicus. It was not very painful, but it annoyed him. He was much emaciated, and in a cachectic state; his bowels were obstinately confined. Under treatment his condition improved, and he

gained notably in appetite and strength. Subsequently a change for the worse took place, the tumor became more painful, he lost flesh and strength, and his appetite failed. As the tumor seemed to be entirely movable, it was decided that an attempt should be made to relieve him of it, and he was transferred to the surgical ward, under Dr. Packard. October 11, 1883, after consultation, an incision was made over the tumor, in a vertical direction, and the tissues carefully divided until the abdominal wall proper was reached, when it became clear that there was firm adhesion between this and the new growth for a space of several inches in every direction. The operation was therefore abandoned, and the wound closed. Healing took place by the first intention, and the man even thought himself to have been benefited, although this was clearly imagination on his part. Emaciation steadily increased, and towards the middle of November the stomach became unable to retain food. From this time the symptoms progressed until death occurred, December 29.

Upon post-mortem examination, it was found that there was an epithelioma of the pylorus, which had become adherent to the transverse colon, and the disease propagated to that structure, a communication taking place between the two cavities. Subsequently, by a local peritonitis, the affected parts had contracted adhesions to the parietal peritoneum at the point to which they had been displaced. The mechanism of this displacement does not seem to clearly appear.

Malignant disease of the peritoneum and abdominal viscera. Presented by Dr. JOHN B. ROBERTS for Dr. V. HORNET, with an abstract of the latter's notes.

The patient, a woman of about 58 years, had, four years previous to death, an attack of what was supposed to be gastro-enteritis of malarial origin. From this she never perfectly rallied, but had four or five intestinal hemorrhages at varying intervals. The last one occurred a few weeks before death. Recently she rapidly lost strength and became emaciated. When seen by Dr. Hornet, some time in December, 1883, she had a tense tympanitic abdomen, and complained of a sense of tension. Constipation, jaundice, flushed cheeks, pulse 100-110, normal temperature, tendency to nausea, and dyspnoea were the chief symptoms.

Ten days before death the thermometer in the rectum marked 106°, but stood, says Dr. Hornet, below normal in the axilla and under the tongue. Small nodules could be felt through the belly-wall, which was less tympanitic than formerly. Death occurred suddenly while at stool.

Autopsy showed nothing important in the chest. The omentum and mesentery were studded with multitudes of tumors varying in size from that of a currant to that of a hen's

ERGOT.—Of the physiological properties or therapeutic applications of ergot it has long been unnecessary further to speak. No drug has been more systematically studied by chemist or physiologist, and there is none whose exact place has been more definitely fixed in the medical practitioner's materia medica. Until within very recent date the pharmacy of the drug was, however, strangely neglected. Ergot is peculiarly a drug whose medicinal activity is affected by conditions of climate, soil, season of gathering, and the various contingencies liable to interfere with the successful gathering, drying, etc., of the crude material. It is well known that the chemical constituents on which its virtue depends are liable to extreme variations with the conditions indicated. Notwithstanding this fact, however, the pharmacist continued to manufacture the usual Galenical preparations after the usual formulæ. The consequence was that the activity of these preparations was liable to variation from year to year, and few practitioners but have been disappointed in results confidently looked for, through this cause. With a view to remedying this great evil, especially great through the liability of the failure of the preparation at times when the life of a patient depends on its prompt action, we several years ago succeeded, after the necessary scientific experimentation, in giving to the profession a constant preparation, under the name of *Liquor Ergotæ Purificatus*. This preparation was made to conform at all times to a fixed standard, and contained an unvarying percentage of those chemical principles on which physiological study has demonstrated the oxytotic properties of the drug to depend. The drug is also known to contain certain principles of a more or less poisonous nature. These were carefully eliminated from the finished preparation. The success of this venture at a preparation of ergot which should be scientifically correct, encouraged us to make similar preparations of vegetable drugs, to which we, for convenience, gave the generic name of "Normal Liquids," and the name of our *Liquor Ergotæ Purificatus* was made to conform to this nomenclature. We, therefore, now place it on the market as

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egg. These were of globular form, firm in consistence, and on section showed a central hemorrhagic clot. The parietal peritoneum was studded with a few small ones, as was the surface of the liver. Dr. Horner further says that he found in one part of the intestine an ulceration of the mucous membrane corresponding to an external tumor, and a tumor on each side of the rectum, high up. In one place he found a cyst with yellowish serous contents on the surface of a tumor. Most of the nodules were of a pale pink color; one noticed, however, was nearly black. I present a portion of the intestine and mesentery and a piece of the liver, with one of the secondary growths there found.

Malignant disease of the testicle tapped for hydrocele. Presented by JOHN B. ROBERTS, M.D.

This case is clinically interesting, because it resembled a hydrocele, and misled me, as well as another surgeon who had previously seen it. When the man came to me, I found a large oval swelling of left side of scrotum, which he gave me to understand had existed for two years. The tumor for six or eight inches long in the vertical direction had a sharply-defined upper limit, as does hydrocele of the vaginal tunic, and was indistinctly elastic, as is a tense hydrocele. The veins on the surface, however, were well marked, and it looked at the lower part a little as if the subcutaneous tissue was about to suppurate. It was this which gave rise to the pain that induced him to seek medical advice at this time, for he had previously postponed having another surgeon draw off the yellow water which he had been told was in it. I did not try to transmit light through the supposed hydrocele, because it is very often a fallacious test: at least absence of light-transmission does not negative the existence of hydrocele. I accordingly thrust a trocar into it, and drew about six fluidounces of pure coagulable blood through the canula. Reinserting the trocar, I pushed it in various directions, but met only solid tissue, and no blood, except when it was pushed in the direction originally taken. Then blood flowed in a quite free stream.

No marked reaction followed, but the pain and tendency to suppuration were removed.

Two weeks later I removed the mass by enucleation, and found the solid tumor here presented, which is the enlarged and infiltrated testicle. The patient now says that fifteen years ago, when about 18 years old, the testicle or scrotum first began to grow larger. He is rapidly convalescing.

Rupture of one of the aortic valves during severe muscular strain. Presented by MORRIS J. LEWIS, M.D.

F. L., æt. 40, laborer, married, was admitted into the Episcopal Hospital February 21, 1884.

His family history was good, and his own health, previous to his present indisposition, excellent. He denied ever having had syphilis or rheumatism.

His work compelled him to handle very heavy casks, and he had the reputation among his fellow-workmen of being a particularly strong man, he being able to lift, unaided, five hundred pounds. Three weeks before admission he was subjected to heavy strains in lifting, and, although no history of sudden cardiac pain or palpitation could be elicited, he did admit feeling a sense of tightness across his chest and some dyspnoea after his day's work. These symptoms gradually increased, and cough, accompanied by bronchitic expectoration, soon made its appearance. On admission, the patient presented all the appearances of a remarkably well-developed and powerful man. He was suffering from great dyspnoea, which was much increased upon exertion. Percussion showed impaired resonance over both lungs posteriorly, which was not altered by change of position, and auscultation revealed numerous moist râles. The apex-beat of his heart, although perfectly regular in its rhythm, was extended in its area, and in the nipple-line in the fourth left interspace. Auscultation revealed a loud, high-pitched, musical murmur, systolic in time, with its point of greatest intensity over the upper part of the sternum. This was also audible over the whole chest. The peculiarity of this murmur was its decidedly vibratory character, like a torn sail flapping in the wind. The patient himself even noticed this.

With the diastole there was a second murmur, of much lower pitch, and not musical or vibratory in its nature. This had its point of greatest intensity over the aortic cartilage.

There was no apex-murmur. Slight œdema of the legs and feet was present. The urine contained no albumen.

The patient was placed in bed and given digitalis, while counter-irritation and dry cups were applied to his chest posteriorly. Under this treatment he rapidly improved, and was soon considered well enough to be about the ward, the dyspnoea only showing itself after any unusual motion or excitement. The murmurs remained in much the same condition as on admission, although the intensity of the musical murmur had lessened.

On March 20, in the evening, after a day as well as usual, he was seized with a severe attack of dyspnoea, with congestion of the lungs; he was considerably relieved by the application of dry cups; the next morning it was noticed that the œdema of the legs had increased, the dyspnoea was still present to a slight degree, and the only change perceived in the cardiac signs was a lowering of the pitch of the musical murmur.

On the 22d the dyspnoea had increased again, and for the first time a low, long, apex

systolic murmur was detected; this was conveyed plainly into the axillary line. The musical murmur was of still lower pitch than before, and at the aortic cartilage the murmurs were much more plainly of a see-saw character.

Irregularity of the heart's action occurred now for the first time.

On the 23d the area of cardiac dulness was as follows: in the horizontal line at height of nipple the dulness began in the middle of the sternum and extended to the left to a point half an inch beyond nipple; in the perpendicular line drawn midway between the sternum and left nipple, the cardiac dulness began in the third interspace and extended downward till lost in dulness of left lobe of liver.

The area of dulness was now triangular, with the base downward. Impaired resonance was now present over the whole chest, both anteriorly and posteriorly, and no cardiac sounds could be heard, on account of the great stridor and the violent movements of the chest; the apex-beat could not be detected, for the same reason. After this the patient became more and more cyanotic and short of breath, and died on the same day, —March 23, 1884.

Autopsy.—Each pleural cavity contained several ounces of serum. The pericardium contained about one and a half ounces of serum, in which several shreds of lymph were discovered. In both ventricles were large clots, partly chicken-fat, extending through the semilunar valves. Weight of heart, after being emptied of clots and blood, one pound and ten ounces. The walls of the left ventricle were enormously hypertrophied, measuring seven-eighths of an inch at thickest part; the cavity appeared slightly distended, as did also the mitral orifice, which would allow the tips of three fingers to pass. The right anterior leaflet of the aortic valves was torn at its posterior insertion into the aorta, thus leaving a free pointed end about three-eighths of an inch long to float in the blood-current. The left anterior leaflet presented two fenestrations,—the posterior one, the smaller, near the insertion of valve in aorta at its upper margin, the anterior one, the larger, situated some distance down from the free border of valve. The aorta at its origin was atheromatous in places and slightly dilated, a patch existing at the point corresponding to the former insertion of the torn valve. The valves were normal, except for slight thickening. The coronary arteries were not atheromatous.

Remarks.—In this case, the atheroma at the point of insertion of the torn valve must have been the cause of the rupture, during a heavy strain. Should a fenestration have existed near the point of insertion, as exists in the left anterior leaflet, this would be a further reason for the rupture occurring at this point.

Frequently-repeated great bodily exertion was the probable cause of the atheroma, as the man was a moderate drinker and denied rheumatism and syphilis. A point of interest in the case was the peculiar character of the *systolic* aortic murmur, which was, as before mentioned, decidedly musical and vibratory.

As the patient did not suffer from sudden palpitation and dyspnoea at the probable time of the rupture, and as this murmur gradually diminished in pitch while the regurgitant murmur became slightly more pronounced, it is probable that the tear at first was slight, and gradually increased under the great strain thrown upon it, thus increasing the area of the loose edge to be thrown into vibration, necessarily lowering the note produced.

The systolic apex-murmur heard one day before death was due to the occurrence of an incompetency of the mitral valves from over-distention of this orifice.

PHILADELPHIA NEUROLOGICAL SOCIETY.

A STATED meeting of the Society was held Monday evening, March 24, the President, Dr. S. WEIR MITCHELL, in the chair.

Dr. MITCHELL made some introductory remarks, as follows, on

THE OBJECTS AND DUTIES OF A NEUROLOGICAL SOCIETY.

I learned but four days ago that I must meet you to-night, for the first time, as your presiding officer. I thank you for the selection, with feelings which are not altogether made up of pure gratitude.

The time will come, I hope, to all of you, when you will be so weighted with professional cares that the prospect of even an agreeable duty will appear to you as this one does to-night to me. For, while it must be a pleasure to preside over a set of thoughtful men, united by the bonds of a common sympathy, the fact that this involves new duties is one from which I cannot escape. I shall begin by saying that this year especially I shall be absent often and for long periods from your meetings, and I have so stated before consenting to serve with and for you.

My own view of the duties of a president involves much more than merely to preside at meetings. He may do much by exciting and guiding debate, by arranging to secure papers, and by urging, and, in a measure, influencing, research.

He also has certain duties as a critic, and, as critical duties are most pleasantly fulfilled when there is as yet nothing to criticise, I shall begin mine by saying briefly what I think this Society ought to be, what its individual members should seek to become, and what they ought to avoid being.

This brings up a question as to why medical men organize societies or join them. When there were no journals, these meetings had an obvious purpose in the needful relations they established. They were to knowledge what the old exchanges were as regarded commerce. But now we have every new thing thrust at us in weeklies which we scarce find time to skim. What, then, is the need for societies? Except a few like our College of Physicians, they cannot sustain libraries, or act on public opinion, or nourish pleasant fellowship. If they have a real reason for existence, it is in the fact that they bring together in groups men having common interests, so that these men stimulate one another by example and criticism, and by the sympathy arising out of unity of pursuit.

It is never very well to be absolutely isolated in your pursuits. I myself can well recall how little interest I found in this city in physiology when I first began to work at it practically. It was a real and serious discouragement. The reverse of this condition of intellectual loneliness has its use. All men do more and better work amidst the competitions of other workers. Some men can do no work unstirred by the ferment of companionship in like efforts.

In these subtle agencies lies the value of associations like ours,—in the examples they offer, the discipline they teach, the criticism they afford, the sympathy they evolve. The advantage of small societies is that they secure definiteness of aim, and that we hear only what interests all who are present.

The danger of such bodies is that of narrowness, and is the risk to which all persons pursuing specialties are themselves liable. It is to be avoided by not limiting your thoughts to what you discuss in this hall, and by keeping up that sympathetic wide-awakefulness which should preserve for you an interest, and a watchful one, concerning the work done in all other lines of professional progress. Neurologists are least of all liable to fail in this direction; their special study is too broad, and their exposure to this form of degeneration only comparative. It is the small specialties which suffer most, and for that reason I would allow no one to practise otology or ophthalmology alone who had not had ten years of general practice. Nearly every one in such a society as this should be capable of entering debate with something worth contributing; whilst in large collections of men a few members only debate a subject, and it may chance to have no relation to the active, practical life of the mass of those present. We shall hope, then, to see here enough of debate, unsparing yet courteous criticism, a desire to talk only when there is something to say, and a highly-cultivated tendency to sit down when that thing has been said. The habit of repetition of un-

thoughtful comment and unfruitful criticism shall have no place here.

Let me say a word as to papers. No doubt we shall, in our existence as a society, hear some papers which, to use an Irish phrase, would have been more interesting if they had never come into being. As to these future and, therefore, defenceless victims of unjust attack, a word in advance. When a man presents an essay here or elsewhere, he should remember that for a time he has a group of people at his mercy tied to the stake of patience by the bonds of social courtesies. It is his duty to have something to say, and then to say it as briefly as possible. There is no literary praise one ought to value like that of condensation. When it is not possible to make brief reports as to cases, it is advisable for society purposes to cut them short by reasonable omissions.

Single cases, or those with clinical personal illustrations, are more desirable here than in larger societies, but I am apt to think little of the future of young men who are in the habit of reporting single cases. Let us have these only when they possess real value or are unusual enough to evoke fresh thought and discussion. The patience which selects a subject, and for years works at it waiting for cases and maturely considering them, seems to be rare in this country, despite of the sure rewards which await its labor. Let us hope to welcome here many such contributions.

Especially may I hope to see and hear much of therapeutics. In the numberless queries for debate at the International Medical Association at Copenhagen I saw not one therapeutic question, and there is a strong feeling in America that in England and this country therapeutics are more sincerely studied and more constantly kept in view by the best physicians than in Germany and France. This is possibly true, and may be owing to the growth of doubt engendered by the certainties of purely scientific work in regard to the insecurity of therapeutic decisions. It is too true that direct therapeutics often owe little to the great masters in neural research; but it is not always true, and from some of the most scientific the art of healing has gained directly, as well as indirectly, through improvements in diagnosis, much that is of priceless value.

Here we must never cease to remember that our ultimate object is to relieve from pain and disability and to save from death. Let us, therefore, keep constantly in view this matter of therapeutics. Let us see all new instruments, consider new drugs, receive hints from our laboratories, and perhaps have deliberate debates or conferences given over to some single agent, or to the treatment of some one disease, with the sharpest criticism upon supposed results.

As an example, I would like well to learn whether all of you accept the present views

of the value of strychnia and the theory of its action, and to hear your evidence thereon.

Not less would I like such a conference, with some surgeons added, on the value of ovariectomy as a therapeutic measure in insanity. I mention these as illustrations; but your ideas as to exclusive diets in nervous maladies would be as interesting.

Regarding you as a set of men grouped for a certain kind of work, something more may be said.

You ought to appoint committees now and then to collect material and suggest work, or to deal with certain questions, such as the best means of determining the amount of sensation present in a part. As to this there are, except Weber's plan, which fails of value save for slight cases, no generally adopted and trustworthy methods. In the same direction there is good work to be done by collective labor in determining, through the effect of nerve-sections, the true distribution of nerves to the skin. I might easily multiply such questions, and some of them would have a peculiar value, relative to climate and seasons in America, and of these would be the relation of rheumatism to chorea, and the statistics of cerebral apoplexy relative to temperature.

It does not seem to me that it will be ever wise to attempt separate publication of proceedings. If there be any surplus of money, it may go towards aiding laboratory work, or to completing for our college library its very imperfect collection of books on neural maladies.

With these hints, and with my renewed thanks, I enter with you upon your society life, in the hope that it may be long, vigorous, and interesting.

The Association then proceeded with the scientific papers of the evening.

SPINAL ACCESSORY SPASM.

Dr. SINKLER presented a patient suffering from spinal accessory spasm, and read the following history of the case:

Anna B. K., aged 41 years, single. Has never enjoyed very good health, but has had no special illness. She has had neuralgic headaches for several years, and about three years ago had rheumatism in the left shoulder. In the spring of 1882 she noticed that, while sitting sewing, her head would turn towards the right shoulder. She could control the movement at first, if she directed her attention to it, but it soon began to be worse and less under the influence of the will. In June or July, 1882, she became unable to restrain the movements of her head. There was no pain in the neck or head, but she became nervous and irritable. There was a sense of discomfort on the top of her head. The use of her eyes seemed to make the movements more troublesome. Her general health has been fairly good, the appetite

poor, and she has worried greatly. She was under Dr. Sinkler's care, at the Infirmary for Nervous Diseases, for several weeks in the spring of 1883, and various remedies were used. Galvanism and static electricity were faithfully applied, as well as massage. Hypodermics of atropia were given in the muscle affected, and the bromides and gelsemium were administered. There was no benefit apparent from the treatment.

The patient was re-admitted to the hospital a few days ago, and her present condition is as follows. She is thin and of spare build; she usually sits resting the right side of the face against her hand to check the movements; the head is rotated to the right every few seconds, and turns more frequently if she is excited or nervous; the chin is turned strongly to the right and the head inclined slightly in the same direction; the head is not drawn back; after being held in this position for about two seconds the spasm relaxes and the head becomes straight; she can keep the head quiet by resting it against some object, and sometimes will rest her head against the wall for this purpose; the left sterno-cleido mastoid muscle is markedly hypertrophied and is tender to handle; pressure over the spinal accessory nerve does not arrest the spasm, it rather brings it on; there is pain at the insertion of the right sterno-mastoid muscle, but none in the left muscle; no contraction takes place in the trapezius muscle, and it is not hypertrophied; the voice is unchanged, and there is no laryngeal spasm.

The urine contains neither albumen nor sugar.

Dr. HARLAN, one of the surgeons at Wills Eye Hospital, kindly examined the patient's eyes, and reported that the optic disks were nearly or quite normal. Vision, R. $\frac{2}{30}$, L. $\frac{2}{40}$.

The patient is nervous and inclined to be hysterical.

Dr. DERCUM mentioned a case which was relieved by nitrite of amyl. He said, however, that the case was specific in nature. Iodide of potassium was afterwards given with satisfactory results.

Dr. MITCHELL believed that gelsemium, in exceedingly large doses, was the best remedy for such cases.

THE PRIMITIVE FISSURES OF THE FETAL BRAIN.

Dr. A. J. PARKER made some remarks on *the primitive fissures of the fetal brain*. These fissures appear very early in foetal life. He did not believe, with some, that they were due to hardening agents, as alcohol and chloride of zinc. He found that these fissures had certain mathematical relations to the brain itself. He regarded them as due to pressure, just as brain-flexure is due to pressure. The brain grows under pressure; it tends to grow more rapidly than the skull. Fissures represent retarded growth.

SPECIMENS SHOWING THE LESIONS OF SNAKE-
VENOM.

THE PRESIDENT invited Dr. Guy Hinsdale to exhibit to the Society some mounted specimens showing the lesions of snake-venom.

The specimens were obtained in the experimental laboratory of Drs. Mitchell and Reichert, in the University of Pennsylvania, and illustrated the ecchymoses seen in the lungs of rabbits into whose jugular veins venom had been injected. The appearances are striking, the blotches of extravasation being in marked contrast with the surrounding lung-tissue. The colors have been preserved by filling the large cells with a fluid composed as follows :

Glycerin, Oss ;

Dense sol'n gum arabic, Oj ;

Sat'd sol'n acetate of potash, Oiss ;

The cells are made by cementing to a square piece of plate-glass a rubber ring, five inches high and five broad, covering the cell, when filled with the fluid, with a round cover-glass. These cells are four inches in diameter. The cement used is known as "Van Stan's Stratena," and, being made with acetic acid, is not affected by the fluid of the cell. Before the rubber ring is fastened to the glass, a triangular nick is cut in it, at two places, so that if the fluid becomes discolored, as in mounting specimens too quickly, the original fluid may be drained away and fresh fluid supplied. Large hypodermic needles and a syringe are of use in this operation. Air-bubbles may also be removed in this way. The specimens exhibited have been mounted for only one month, but they are apparently as fresh as ever.

The eight specimens exhibited the lesions of pure venom of the rattlesnake, the lesions of the three globulins, and the peptone which compose the poison.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held April 9, 1884, GEO. F. SHRADY, M.D., President, in the chair.

MYXO-FIBROMA OF THE VULVA.

Dr. H. J. GARRIGUES presented a pedunculated tumor removed from the vulva, and remarked that such tumors must be very rare, as they were not mentioned in the works of Emmet, Thomas, or Barnes. In the last German encyclopædia, edited by Billroth, there was a figure illustrating such a case, and it was there called myo-fibroma. The exact diagnosis, however, should be myxo-fibroma. His specimen was removed from a patient who was pale, dyspeptic, and suffering from eczema of the scalp. The growth had been noticed nine years ago, but nothing had been done for it, and what induced her at last to

seek relief was that the tumor began to slough and to emit an offensive odor. It was attached to the left labium majus by a pedicle the size of the finger, and of some length. The color was that of the surrounding parts ; it measured eight centimetres in length, seven in width, and four in thickness, and had somewhat the shape of a pear. It was covered with large scales of epidermis ; the surface was rather even. It was not the seat of pain, nor was it sensitive to touch. The feel was elastic. In the pedicle could be felt rather a large artery. He applied the clamp, made a flap as in amputating the finger, cut the tumor off at the level of the clamp, tied the artery, and united the two flaps with catgut suture. There was complete healing of the cicatrix on a level with the surrounding tissue. He was not surprised, after making the microscopical examination, that a large amount of blood had come out of the tumor. There was no capsule ; immediately beneath the epidermis was the tumor-substance. The epidermis was very thick, contained normal papillæ, no hair-follicles nor glands. In the more superficial part was considerable connective tissue, with different cells interspersed. In the deeper part the cell-material was very much increased, while the connective tissue was decreased in amount, so that there was a fine connective-tissue reticulum full of protoplasmic matter, constituting what was called myxomatous tissue. Everywhere were seen large numbers of arteries and veins.

Dr. W. M. CARPENTER remembered to have seen two such cases. The tumor was attached either directly to or very close to the labium.

PYELO-NEPHRITIS FOLLOWING GONORRHOEA.

Dr. H. N. HEINEMAN presented specimens removed from the body of a man, 45 years of age, who was admitted to the hospital yesterday. On admission the temperature was 100.5°. It afterwards fell to 97.5°. The patient was in a moribund condition. There was sero-sanguinolent expectoration, and some blood was passed with the urine. Death took place at 1 A.M. At the autopsy there were petechiæ over the surface of the body. There was marked pulmonary congestion and œdema. There were also some lesions in other organs, but the chief interest related to the kidneys. The man twenty years ago had gonorrhœa, and subsequently chronic bladder-trouble. The autopsy had not been fully completed, but the history pointed to stricture of the urethra, and doubtless such would be found. The walls of the bladder were thickened, and the mucous membrane the seat of recent inflammation. One of the kidneys was enormously increased in size, and was the seat of pyelo-nephritis. The other kidney presented in a more marked degree the ordinary lesions of chronic Bright's disease, and in a less degree pyelo-nephritis. It was probable the bladder- and kidney-

troubles were secondary to stricture originating in gonorrhœa, and that the numerous hemorrhages found in different organs and on the surface of the body were due to a septic influence.

CYST OF THE BROAD LIGAMENT TWISTED UPON ITS PEDICLE, SIMULATING ENLARGEMENT OF THE UTERUS.

Dr. ELIZABETH M. CUSHIER presented the specimen, which was removed post-mortem from the body of a girl who died at the sixteenth year. She was admitted to the infirmary on the 26th of March. She began to menstruate at the age of fourteen. At first, menstruation was profuse. During the following two years it was irregular. Last summer there was suppression of menstruation for nine weeks. It then came on and was very profuse. It diminished somewhat until four weeks previous to admission, when there was again profuse hemorrhage, which continued until her death. Until a week previous to admission she had been attended by another physician. She was then visited by the district physician, who tamponed the vagina. She was once found with the muscles in a state of tonic contraction, and there was complete insensibility. With this exception there had been no other symptoms than those of hemorrhage. She was said to be a nervous girl, and earlier in life had had chorea. Vaginal examination brought away blood-clots; the neck of the uterus was dilated; there was a tumor in the median line reaching half-way to the umbilicus. The temperature and the pulse at that time were normal. Ergot was at first given, with the effect of apparently reducing the hemorrhage, but it again returned profusely. When brought to the infirmary on the 26th she was still flowing, but at this time not profusely. On this evening there was noticed for the first time a slight elevation of the temperature, 100.5° ; the pulse was 110. When Dr. Cushier saw her on the 27th there had been free hemorrhage, dark clots were in the vagina, the patient was perfectly pallid, the pulse quite weak. The finger could be introduced as far as the internal os. The tumor in the median line gave the impression of pregnancy of about four and a half months. Pressure upon it communicated an impulse to the finger on the cervix. The girl said there was a possibility of pregnancy. The tumor seemed rather soft, and gave not altogether the sensation of the pregnant uterus, but it seemed that it could not be accounted for in any other way. The hemorrhage was quite free, and it was decided to introduce disinfected laminaria tents of small size. In the afternoon of the next day the tents were removed, but the uterus contracted so that only a sound could be introduced. The cavity still measured but three inches, as it had done before the use of tents. It had been previously supposed

that something prevented the entrance of the sound to the full depth. Examination was also made per rectum. Extra-uterine pregnancy was thought of, but could not be confirmed. The patient vomited incessantly, diarrhœa set in, the temperature at one time rose to 103° , the pulse was feeble and part of the time irregular, and death finally ensued, April 1. The patient remained conscious to the last. At the autopsy, a tumor about the size of a child's head lay above the pubes, which was found to be a cyst of the broad ligament with a long pedicle, and twisted in such a way that the tumor was held firmly over the fundus of the uterus, directly in the median line. The pedicle was probably twisted upon itself twice. The uterus was enlarged, but it was uncertain whether there had been pregnancy, or whether the enlargement was a simple hyperplastic increase. The other abdominal organs were normal, except for extreme pallor. The lungs were œdematous. There was some mitral insufficiency, which had given rise to a murmur during life. There were heart-clots, either post-mortem or ante-mortem. Dr. Cushier regarded the case as one full of interest, particularly with reference to the difficulty of diagnosis. Looking at the tumor on the table, the diagnosis would appear easy, but it was altogether different during life. The patient was seen by several physicians of acknowledged skill, and the true condition was not recognized. The possibility of a fibro-cyst, of a pregnant uterus, of an enlarged uterus with some growth within its cavity, of extra-uterine pregnancy, were all questions which presented themselves and could not be satisfactorily decided. Another point of interest was with regard to the cause of hemorrhage from the uterus. In the light of the autopsy the question suggested itself as to whether it were not due to interference with the return circulation by the twist of the pedicle of the tumor involving the broad ligament. As to the cause of death, she thought it still remained uncertain.

Dr. GARRIGUES said there were but two ways of determining whether or not pregnancy was present. The one was by examination of the specimen, and the other was from a study of the clinical symptoms. With regard to the latter, according to his experience, the earliest signs of pregnancy were to be found in the mammæ, with the exception of the somewhat doubtful gastric symptoms. He had been able to detect pregnancy as early as the sixth week by simple inspection of the mammæ. It would be found that the limiting-line of the areola lost its sharpness at a particular spot, namely, upward and outward. There the line became indistinct early in pregnancy, there being simply dark-colored tongue-like projections from the circumference. At the same time there would be found some increase in the volume of the agglomerated glands, but this sometimes oc-

curred in the virgin. Another sign related to the violet color of the vagina. As to hemorrhage after abortion, it was much more likely to be found in cases in which only the ovum was thrown off, the decidua being left. He never used tents except in extreme cases. They were very dangerous. As to the cause of death, it was probably septicæmia.

Dr. R. NEWMAN said he presented a cyst of the broad ligament to the Society some time ago which resembled the present case very much. In that instance there was the same obscure uterine hemorrhage.

Dr. PUTNAM JACOBI thought a study of the history of the case and of the post-mortem findings would point to death from acute anæmia and heart-failure, and not to septicæmia.

CARCINOMA OF THE STERNUM, CLAVICLE, AND ILLIUM.

Dr. F. FERGUSON presented specimens and microscopical slides illustrating carcinoma of the bones mentioned.

ACUTE GENERAL MILIARY TUBERCULOSIS.

Dr. FERGUSON presented a uterus, the mucous membrane of which contained tubercular deposits, being the first instance in which he had seen miliary tubercles in this situation. The patient was 30 years of age, and died in a comatose state, five weeks after the inauguration of her symptoms, from tubercular meningitis. The case was interesting because of the insidiousness of the invasion of the disease, and because of its rapid course. Tubercles were also found in the lungs and in other portions of the body.

FIBROID INDURATION OF THE HEART.

Dr. FERGUSON also presented a number of hearts illustrating myocarditis, or fibroid induration of the walls of that organ. In some the disease was more marked than in others, in some it was associated with endocarditis, in others with pericarditis, and in still others neither of these conditions was present. In almost all of the cases there was also extensive chronic diffuse nephritis, and many of the patients suffered from rheumatism, but syphilis was usually denied. It had generally been supposed that the condition was often due to syphilis. The lesion was in every instance in the left heart, and not in the right. One author was represented as making a quotation to the effect that the right heart was always affected.

PERITONITIS IN THE INFANT.

Dr. J. LEWIS SMITH saw the patient only the day before its death. It died on the fourteenth day. There had been nothing unusual in the birth. A week before his visit, the nurse said, the child had been very fretful. There afterwards was noted increased temperature.

He found evidence of peritonitis. There was great distention of the abdomen and meteorism; the child cried when pressure was made over the abdomen. The rectal temperature was 102.4°. During the first ten days of life the child had gained only one ounce in weight. Some pus could be squeezed from the umbilicus. The cord had separated at the seventh day. The autopsy was made by Dr. Welch. The most marked lesions were found along the course of the umbilical cord, where fibrinous pus was quite thick. The lymphatic vessels along the under surface of the diaphragm were also filled with pus, and Dr. Welch had stated that there probably would have been an extension of the inflammatory process to the pleura had the child lived longer. The umbilical vein was filled with grayish-red, broken-down, and purulent thrombi, closely adherent to the walls of the vessel. Dr. Welch explained the peritonitis by the statement that micrococci, which were present, had found their way through the umbilical vein into the peritoneal cavity, and that this fact also explained the reason for there having been a greater degree of inflammation along the course of the vein. Dr. Smith said that if this explanation of peritonitis in these little patients were accepted by pathologists, it was interesting and suggestive. Some weeks ago there had been some puerperal fever and erysipelas in the maternity wards of the institution, where the child died, and for that reason the wards were closed for a time. Whether the present case was in any way connected therewith he was unable to say.

Dr. W. P. NORTHRUP had seen four cases of peritonitis in children, one of which was nine, another eleven, and a third twenty days old. He did not remember the age of the fourth. In all of these cases the umbilical vein was carefully examined, and in none was thrombus found. The cord had previously come away and left a perfectly healthy stump. In one case there was an abscess of the shoulder, which was the only other lesion which could possibly have attracted attention, and no connection between this and the peritonitis could be traced. There was no pleuritis; all the thoracic viscera were healthy. All four of the cases were, so far as could be ascertained, cases of idiopathic acute diffuse peritonitis. In reply to a question, he stated that the disease did not occur at a time when puerperal fever had been present in the institution; they occurred at different periods, extending over some months.

Dr. PUTNAM JACOBI did not think that absence of a thrombus in the umbilical vein in Dr. Northrup's cases necessarily excluded infection as a cause of the peritonitis. She could not help supposing there was infection in the case of abscess of the shoulder. The presence of an abscess and of peritonitis occurring at the same time was at least very significant.

REVIEWS AND BOOK NOTICES.

MEDICAL DIAGNOSIS WITH SPECIAL REFERENCE TO PRACTICAL MEDICINE. A GUIDE TO THE KNOWLEDGE AND DISCRIMINATION OF DISEASES. By J. M. DA COSTA, M.D., LL.D., Professor of Practice of Medicine and of Clinical Medicine at the Jefferson Medical College, etc. Illustrated with Engravings on Wood. Sixth Edition, revised. Philadelphia, J. B. Lippincott & Co., 1884.

The mere announcement of the appearance of the sixth edition of this classical work would be sufficient, but we find, upon looking over its pages, so many evidences of careful revision and discriminating judgment in adding new material to keep pace with the rapid progress of medical science that we cannot forbear making a brief note of comment. New illustrations have been added (including one of the now celebrated bacillus tuberculosis, and also of the spirillum of relapsing fever), and the text has been diligently revised. The book is handsomely and appropriately printed on toned paper, and altogether is one which affords real pleasure in the reading.

The translation of this work into German and Spanish, which has been announced, is not only a just tribute to its real worth, but it also reflects honor upon American medicine.

ELEMENTS OF MODERN CHEMISTRY. By ADOLPHE WURTZ (Senator), Member of the Institute, Honorary Dean and Professor of Chemistry of the Faculty of Medicine of Paris, Member of the Academy of Medicine, etc. Second American Edition. Translated and edited, with the approbation of the Author, from the Fifth French Edition, by WILLIAM H. GREENE, M.D., Professor of Chemistry in the Central High School, Philadelphia, etc. With One Hundred and Thirty-Two Illustrations. London and Philadelphia, J. B. Lippincott & Co., 1884. 12mo, cloth, pp. 770.

Professor Greene has rendered a real service to American students in presenting in such attractive form his admirable and able translation of Wurtz's "*Leçons élémentaires de Chimie moderne*." In addition to a complete revision of the text in accordance with the fifth French edition, Professor Greene, having received authorization from M. Wurtz, has reclassified the metals in accordance with the now generally accepted theory of atomicity. A short chapter on chemical energy and a brief history of Mendelejeff's periodic law have been added.

This work is a compendious treatise on modern chemistry; it is fully illustrated, and abounds in descriptions and demonstrations, and we are glad to see that it has been adopted as a text-book by some of the principal medi-

cal colleges, including the University of Pennsylvania and the Women's Medical College of this city.

GLEANINGS FROM EXCHANGES.

RECOVERY AFTER TRANSFIXION OF THE HEART.—An elderly lady with suicidal propensities, for which she was under treatment in a hospital, was found one evening, just after getting into bed, to have become suddenly and violently ill, and medical aid was summoned at once. On its arrival she was found to be quite unconscious, very pale, skin cold and clammy, pupils widely dilated, but there was no conjugate deviation present; the features were drawn and altered, and the head was rolled rhythmically from side to side, patient moaning slightly at times. The radial pulse on the right side was very weak, that on the left almost imperceptible,—rate seventy-eight per minute. The left arm and leg were quite paralyzed, so far as could be made out. The right arm was lifted and let fall feebly and aimlessly, now and then. She had vomited a little, but no deleterious substance could be detected in the rejected matter by the rough examination possible at the time.

On palpation over the præcordia, the cause of this rather puzzling condition was discovered. A knob about the size of a large pea was felt adhering to the chest-wall in the situation of the apex-beat, and this proved to be the head of a large steel shawl-pin, about three and three-eighths inches long, which the patient had succeeded in secreting, unobserved by the attendant in charge, and which she had thrust right into the chest, at the situation mentioned above, the part embedded being directed slightly upwards and inwards and measuring about two and three-quarter inches. It was at once removed, and stimulants administered, and almost immediately the heart's action began to gain in force. The pulse became stronger and steadier, and consciousness slowly and gradually returned. For some time there was very urgent dyspnoea, and patient complained much of pain in the præcordia, but these unfavorable symptoms diminished as time went on, and after an hour had passed she was much better; the paralysis of the left side had disappeared; the pulse was steady, and of fair strength,—rate one hundred and eight per minute; and she was quite conscious of what occurred around her. Four hours after the occurrence she was sick again and vomited a little; but this soon passed off, and she fell asleep, and slept at intervals during the rest of the night, stimulants being given frequently in small doses. On the following day she complained of some pain at the site of puncture, and of headache, but was otherwise pretty well, and her recovery after this proceeded without interrup-

tion. Some months have now elapsed, and no trace of the injury can be detected.—*Edinburgh Medical Journal*.

RHINOSCLEREMA.—Observations on this disease have been hitherto limited to Vienna; but Pellizzari has had the good fortune to meet with a case at Florence, and has published an exhaustive monograph dealing with it. The affected person was a female aged 37, who had had twenty children, of whom only seven survived. Although her husband was syphilitic, he does not appear to have communicated his diathesis to his wife. The children died of nervous disorders (convulsions and epilepsy). The disease commenced about 1868; death occurred in 1882, mainly caused by the mechanical obstruction to her air-passages as a result of the continual increase of the growth. Antisyphilitic treatment had no effect on the progress of the disease. The author has little to say on the question of etiology. He believes rhinosclerema to be a bastard product of syphilis, and that more may yet be said about syphilitic treatment as applied to it. The disease itself is characterized by the development of an infiltration of a homogeneous character, containing a number of cells of variable form and size, but nearly all of the embryonic type. The infiltration commences always in the neighborhood of the vessels, and in the submucous tissue, whence it spreads. Pellizzari regards the process as an inflammatory one of a special kind. As for the cause, the author inclines to the parasitic theory. Rod-like bodies have been found within the cells, and aggregated into masses which stain strongly with gentian violet in the intermediate tissues. Frisch has cultivated the organism, but so far inoculation has with him yielded no result. The author remarks, "To-day pathology has but a single note,—the micro-organisms. It is a mirage, an illusion which will vanish to-morrow; but the imperious necessity which urges man on to test the reason of things has compelled us to-day to follow this scientific phase." This paper is very fully and well illustrated.—*Annales de Dermatologie et de Syphiligraphie*, September, 1883; *Edinburgh Medical Journal*.

ERYSIPELAS WITHOUT FEVER.—Dr. Cavasy reported to the Medical Society of London, at its last meeting, five cases of facial erysipelas with low temperature, in two of which an extension of redness and swelling had occurred, while the temperature was subnormal. Although these were not regarded as genuine attacks, yet it was believed that they could communicate the disease.

DANGER OF ADMINISTERING CHLOROFORM BY HYPODERMIC INJECTION.—M. Bouchard found that hypodermic injections of chloroform in rabbits and dogs cause death from acute congestion of the kidneys. Albuminuria generally appeared two hours after the injection, and was generally accompanied by

hæmaturia. Albuminuria was also observed after inhalation of chloroform in rabbits. In man, temporary albuminuria has also been noticed after inhalation, but not after hypodermic injection; but M. Bouchard thinks that the injection of 3 ccm. might prove dangerous.—*British Medical Journal*.

MISCELLANY.

CHLOROFORM-WATER.—This application, which is much employed in Paris, is prepared as follows. An excess of chloroform is poured into a bottle three parts filled with distilled water, and, after repeated shaking, the mixture is allowed to stand until the extra chloroform is deposited and the liquid quite clear. The transparent portion is then to be removed by a siphon, forming a saturated solution of ten grams of chloroform per litre. Applied on compresses, either in its pure state or diluted with half or its whole weight of water, it is found to relieve superficial pains; but when these are more deeply situated, a very hot linseed poultice is applied, which is afterwards replaced by the compress of chloroform-water. Active revulsion is thus produced, which relieves the pain. Associated with a weak solution of opium, it relieves vague dental pain; and with syrup of morphia it is successfully given internally for various forms of malaise from indigestion, such as gapings, eructations, sense of weight, etc. It is also useful as a palliative in cancer of the stomach.—*Union Médicale*.

CATTLE are more valuable than human beings: at least they are viewed in that light by certain Congressmen. The outlay of thousands of dollars is asked for to restrict the spread of the foot-and-mouth disease now alleged to be prevailing in Kansas, while not one cent is appropriated to stay an epidemic of diphtheria which prevails in every State. A special session of the Legislature is called in Kansas, and a bill passed providing for a State veterinarian, in less than a week after the alarm becomes general. But no especial anxiety is evidenced to pass a bill providing for a State board of health: yet more people die from contagious diseases in a year than cattle. The *Sanitary News* says that Mr. Longfellow was entirely wrong when he gave his advice to "be not like dumb, driven cattle." If the people of Kansas were literally like dumb, driven cattle, they might have something done to lengthen their lives. Why is this? Because we cannot sell our children, while we can our cattle. Hence the children die, and the cattle are protected.

At the Berlin Polyclinic (Ziegelstrasse, 3), monthly courses are given on ophthalmology, operative surgery of the eye and practical instruction in the use of the mirror, neuro-

pathology and electro-therapeutics, laryngoscopy and œsophagoscopy, otology, rhinology, dermatology, syphilidology, histology, and forensic chemistry. Two laboratories, one for chemistry and one for histology, are attached to the Polyclinic, where ample opportunity is afforded for executing researches on scientific objects. On the 1st of January a third laboratory, destined for working in bacterioscopy, was opened, and a course of bacterioscopy was added to the other courses.

SARCO-PEPTONES.—A peptonized beef extract, prepared by the Rudisch Company, is offered to the profession by Parke, Davis & Co., under the title of Sarco-peptones. In consistence it is a jelly, having an agreeable flavor, and odor of osmazome, and can be used in solution like ordinary beef extract, or may be spread upon thin slices of bread. The superiority in nutritive qualities of such a preparation over ordinary beef-tea is susceptible of easy demonstration.

THE ANALECTIC, edited by Walter S. Wells, M.D., and published by G. P. Putnam's Sons, New York, is a monthly periscopic summary of the progress of medical science, which began with January, 1884. Each number contains forty-eight pages, large size, double column, and handsomely printed. The subscription-price is two dollars and fifty cents per year.

THE ARCHIVES OF PEDIATRICS, edited by Dr. William Perry Watson, with a number of collaborators, is a monthly journal devoted to the diseases of infants and children. With original articles and reviews, it contains each month a *résumé* of current literature upon pediatrics. It is ably conducted and well printed. Subscription-price, three dollars per year.

DR. JOHN H. PACKARD has been elected one of the attending surgeons to the Pennsylvania Hospital.

NOTES AND QUERIES.

PHILADELPHIA MEDICAL JURISPRUDENCE SOCIETY.

At the stated meeting of the Medical Jurisprudence Society to be held May 13, 1884, Henry Leffmann, M.D., will read a paper entitled "Euthanasia, a Consideration of the Permissibility of Terminating Life in Cases of Hopeless and Painful Illness."

OBITUARY.

PROF. WILLARD PARKER, M.D., of New York, died at his home on the 25th ult., at the age of eighty-four years.

DR. CHARLES T. HUNTER, late Demonstrator of Anatomy to the University of Pennsylvania, and Surgeon to the Out-Patient Department of the Pennsylvania Hospital, died with chronic meningitis on Sunday, April 27, aged forty-one years.

DR. FREDERICK C. SHEPPARD, of Philadelphia, died April 14, at Colorado Springs, with pulmonary consumption. He was in the twenty-eighth year of his age.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 13, 1884, TO APRIL 26, 1884.

HOFF, JOHN VAN R., CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty at Alcatraz Island, Cal., and to report to the commanding officer at Fort Mason, Cal., for duty as post-surgeon. Paragraph 3, S. O. 45, Headquarters Department of California, April 16, 1884.

PORTER, JOSEPH Y., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for two months, to take effect about May 5, 1884. Per S. O. 38, Headquarters Division of the Missouri, April 19, 1884.

BIART, VICTOR, CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri. Paragraph 2, S. O. 91, A. G. O., April 19, 1884.

LA GARDE, LOUIS A., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for two months' extension. Paragraph 1, S. O. 91, A. G. O., April 19, 1884.

NEWTON, R. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Sill, Indian Territory, and ordered to Fort Elliott, Texas, for duty. Paragraph 1, S. O. 77, Headquarters Department of the Missouri, April 14, 1884.

PILCHER, JAMES E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Camp Poplar River, Montana. Paragraph 2, S. O. 37, Headquarters Department of Dakota, April 7, 1884.

CHAPIN, ALONZO R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Douglas, Utah, and ordered to Fort Laramie, Wyoming, for duty. Paragraph 2, S. O. 33, Headquarters Department of the Platte, April 15, 1884.

WALES, PHILIP G., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered to report to the Commanding General, Department of the Columbia, for assignment to duty. Paragraph 11, S. O. 84, A. G. O., April 11, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM APRIL 13 TO APRIL 26, 1884.

Medical Director P. S. WALES, to continue on duty as member of Ration Board.

Surgeon H. M. WELLS, to special duty at Hot Springs, Ark. Medical Director GEORGE PECK, ordered as President of Board of Medical Officers detailed for special duty at Coaster's Island, near Newport, R.I.

Medical Director A. C. GORGAS and Surgeon I. C. WISE, to be members of above Board.

Medical Inspector H. C. NELSON, detached from Navy-Yard, Washington, and placed on waiting orders.

Surgeon D. McMURTRIE, ordered to duty at Navy-Yard, Washington.

P. A. Surgeon C. T. HIBBETT, ordered to U. S. Ironclads, James River, Va.

P. A. Surgeon H. AULICK, detached from Ironclads and ordered to "New Hampshire."

P. A. Surgeon W. S. DIXON, detached from "Hartford" and ordered to Coast-Survey Steamer "Hassler."

P. A. Surgeon F. H. TERRILL, detached from "Hassler" and ordered to "Hartford."

Surgeon I. C. WISE, detached from "New Hampshire" and placed on waiting orders.

Medical Inspector W. K. SCHOFIELD, appointed Medical Inspector on active list.

P. A. Surgeon F. S. NASH, detached from Laboratory and ordered to "Alert" (Greely Relief Expedition).

P. A. Surgeon I. H. HALL, ordered before Retiring Board.

Medical Inspector H. C. NELSON, placed on Retired List.

P. A. Surgeon S. W. BATTLE, placed on Retired List.

P. A. Surgeon F. H. TERRILL, resigned.

P. A. Surgeon I. M. MURRAY, ordered to "Minnesota."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 17, 1884.

THE AMERICAN MEDICAL ASSOCIATION.

THE Thirty-Fifth Annual Meeting of the National Association convened in Washington on the first Tuesday in May, and remained in session four days (May 6, 7, 8, and 9). It was one of the largest and most important meetings of the Association which has ever been held, twelve hundred and seventy names of delegates and permanent members having been registered.

The general sessions were held at the Congregational Church, on G Street, corner of Tenth, which was kindly offered for the occasion. The usual difficulty attending the clumsy and inefficient method of registration was experienced, delegates having to stand in line for hours waiting for their turn to register their names. The adoption of a simplified system by which the member desiring to register his name could enclose his credentials and blank properly filled out in an envelope, either at the meeting or previous to it, and have the card of membership, invitations, etc., similarly enclosed and returned to him by the Treasurer, Secretary, or Chairman of Committee of Arrangements, would answer all purposes and save much valuable time.

The usual disorder was observed whenever any question was put to vote, owing to the presence of persons who were not entitled to vote obstructing the proceedings. This was also exemplified in the Sections, where persons took part in the discussions some of whom were not even members of the Association. This has been noticed at previous meetings, and will probably continue at future sessions until the Sections are organized on a better basis. There were an unusually large number of papers offered for discussion, and the addresses of the President and the chairmen of the various Sections call for special commendation.

GENERAL SESSIONS.

First Day, Tuesday, May 6.—The Association was called to order at 10.45 o'clock, by Dr. Garnett, chairman of Committee of Arrangements. Prayer was offered by Rev. W. A. Leonard.

ADDRESS OF WELCOME.

Dr. A. Y. P. Garnett, chairman of the Committee of Arrangements, in welcoming the members of the Association, spoke of Washington as a place of eminent and renowned gatherings, where the supreme interests of the whole country are studied and discussed by its

largest intellects, with a view to the discovery and enforcement of those political and constitutional laws which shall best establish and maintain the well-being of the republic. It was, he thought, a fit place for the meetings of this body, for no laws devised by human wisdom could be more important to humanity than those laws of life upon which rests the "*salus populi*." He referred also to the peculiar advantages possessed by this body, which is not affected by sectional interests or by party ambitions. Having no constituencies to whom they were responsible, its members moved in a higher plane, and were answerable alone to the dictum of scientific truth. The truths they discovered could not be patented for individual use or converted into practical profit by huge monopolies. He alluded eloquently to the mission, the duties and responsibilities of the physician, and to his exceptional experience. What, he asked, in comparison to such experience, was the knowledge of human nature acquired in the confidential council-chamber of the lawyer, or learned in the secrecy of the confessional, even when remorse wrings truth from the penitent? Their daily experience forced them to recognize with humility that beyond all their knowledge there were experiences they could not understand, laws they could not explain or regulate, and powers and influences they could not control; and should they not, he asked, be taught by the mental, moral, and physical relations which these experiences brought before them, an abiding faith in the wisdom of that Being who has made the ministry of pain and death a part of His divine administration of nature and in nature's order of animate life? He referred to the value and importance of these periodical gatherings, and the useful results which have thus far followed the successful administration of the national organization.

Dr. Garnett, in conclusion, gave an account of the arrangements made with the various railroads, and announced the several receptions and other invitations tendered to the Association.

The Secretary called the roll, five hundred and ninety names having been registered.

A question having arisen as to the status of members by invitation, the President decided that such members could only be admitted from localities where no medical society existed, otherwise represented in this Association. The members of the District of Columbia Medical Society were invited to take seats "on the floor." A number of other gentlemen were also invited to occupy a similar elevated position.

Letters were announced as received by the Secretary from A. Pearce Gould, F.R.C.S., of London, and John L. Atlee, ex-President of the Association, which were ordered to be entered upon the minutes.

THE PRESIDENT'S ADDRESS.

Prof. Austin Flint, the President, was introduced by Dr. Garnett. He began his address with a retrospective glance at the early history of the Association, briefly as follows:

The objects of the Association are clearly and tersely set forth in the preamble to the plan of organization adopted at the formation of the Association:

"Whereas, The medical convention held in the city of New York in May, 1846, have declared it expedient for the medical profession of the United States to institute a National Medical Association, and inasmuch as an institution so conducted as to give frequent united and emphatic expression to the views and aims of the medical profession in this country must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor, and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities, and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it; therefore, be it resolved, in behalf of the medical profession of the United States, that the members of the Medical Convention held in Philadelphia in May, 1847, and all others who, in pursuit of the objects above mentioned, are to unite with, or succeed them, constitute a National Medical Association."

The orator then proceeded to show how far these aims had been kept in view, and the progress which had been made in carrying them out. Cultivating and advancing medical knowledge has been diligently kept before the Association as its primary object. Elevating the standard of medical education had not been neglected, many abuses had been corrected, but preliminary education was declared to be the great need of the medical student at the present time. He suggested a remedy in answer to the question, "What can our Association do to promote more and more the elevation of the standard of medical education?" It is to be borne in mind that, exclusive of the motives for personal improvement, which appeal to its members individually, the profession must rely upon itself for whatever is to be done. The American Medical Association represents the profession of the whole country. Hitherto the Association has been content with reports, addresses, and communications pointing out existing defects in medical education, and recommending changes and improvements, the immediate adoption of some of which was impracticable. Too often a predominant spirit of animadversion has been apparent.

Let a course be pursued which is more active and practical with reference to measures for progress. Let certain measures be proposed for immediate adoption which are within the limits of practicability. Let these measures receive the sanction and support of local Associations in the different States of the Union. Let the National Association take the initial steps, and solicit conferences with, and the co-operation of, State Associations and the leading medical colleges throughout the country, with a view to agreement respecting the proposed definite measures. Let these steps be taken in a kindly spirit, with an earnest desire to harmonize different views and interests, in order that there may be united action as regards improvements agreed upon. In this way, as we may hope, uniformity in the different States will be secured in behalf of the second of the objects for which our Association was instituted. There can be but little difference of opinion as to the improvements in medical education which it is desirable should be effected; the opposing difficulties are chiefly those which interfere with uniformity throughout the United States. I venture to suggest the appointment of a standing committee on medical education with a view especially, by means of communications with State associations and colleges, to secure uniform action with reference to requirements for matriculation and for graduation. My purpose in the suggestion of such a committee is not to obtain reiterated resolutions setting forth what ought to be done, but reports at the next meeting, and at subsequent meetings of the Association, of what has been actually accomplished. It is not to be expected that all desirable improvements will be at once effected. Considering the greater relative importance of preliminary requisites for the study of medicine, were these made the first objective point in the action of the committee with a satisfactory result, a very important advance would be made, and this would be likely to prove an earnest of success in effecting other improvements.

The third object of the Association, "for promoting the honor, usefulness, and interests of the medical profession," he discussed with special reference to medical ethics, and considered some of the objections which have been offered against the Code of Ethics, and offered a recommendation "that the Association adopt resolutions embodying a more precise specification than the Code furnishes of the grounds for refusing fellowship with irregular practitioners."

In conclusion it was suggested, as a means of facilitating friendly intercourse between members of the medical profession, that a committee should be authorized to invite the International Medical Congress of 1887 to meet in the United States.

He said, "My suggestion in regard to the International Medical Congress is not made

solely on my own responsibility, but at the instance of several well known for their active interests in the welfare of the American medical profession. By one of the most eminent of these, quite recently, I was requested to make the suggestion, in a letter written with a hand tremulous from serious illness which has deprived the Association of his presence at this meeting; one whose absence is a disappointment to many who were desirous to behold once more the genial, benignant countenance which has greeted us heretofore at our annual meetings; one whose writings have made American surgery illustrious; who is revered by the many thousands of practitioners who, during the last half-century, have listened to his instructions, and who is honored not only in our own country, but in other countries, as no member of the medical profession in America was ever honored before; one admired by all who have known him, and beloved by those who have enjoyed the privilege of his friendship. I know that I speak the heart-felt sentiments of every one who hears me, and of our brethren throughout the whole country, when I express a fervent wish that Prof. Samuel D. Gross might be restored to health, and his life spared yet many years to his family, his friends, and his profession, which he adorns."

The advantages of Washington City as the place of meeting were then briefly mentioned, and the medical officers connected with the office of the Surgeon-General of the United States were signalized as worthy of all praise and honor, to whom the profession and the country are indebted for having made the Army Medical Museum and National Medical Library institutions of which we may be justly proud.

RESOLUTIONS OF SYMPATHY WITH PROF. GROSS.

Dr. J. M. Toner offered the following:

"*Whereas*, It has come to the knowledge of this Association that one of its former Presidents and a surgeon of world-wide reputation is confined to his room by illness, therefore be it

"*Resolved*, That the American Medical Association expresses to Dr. S. D. Gross its heart-felt sympathy in his illness, and the sincere wish for his speedy recovery and preservation for many years, to the enlargement of the world-wide reputation and justly-merited honors to which he has attained."

These were adopted by a rising vote.

Dr. T. G. Richardson, of Louisiana, stated that he had just left the bedside of the very ill and honored ex-President of the Association, and that when he asked him for any message that he might desire to send, Dr. Gross said, feebly, "Give them my love."

On motion, the above resolution was telegraphed to Dr. Gross, together with an extract from the President's address, and the loving sympathy of the Association.

Dr. L. A. Sayre, of New York, made a motion that a committee be appointed to invite the International Medical Congress, which is to meet in Copenhagen, to select the place of its following meeting in this country.

Dr. Alonzo Garelton, of Maine, moved that the address be referred to a committee of five, to take action upon the various important questions concerned in it, and report to the Association as soon as possible. This was amended so as to read "a committee of seven," and adopted.

Second Day, Wednesday, May 7.—The Association was called to order, the President in the chair, at 10 o'clock. Prayer was offered by Rev. W. A. Bartlett, D.D.

The President announced in a few words the deep loss of the Association in the death of Prof. Gross, and appointed the following a committee to draft suitable resolutions: Drs. T. G. Richardson, of Louisiana; Lewis A. Sayre, of New York; J. H. Packard, of Pennsylvania; F. H. Hamilton, of New York; Moses Gunn, of Chicago; W. T. Briggs, of Tennessee; and I. Minis Hays, of Pennsylvania.

On motion by Dr. Jenks, of Texas, the President was added to the committee, and, on motion by Dr. Richardson, Dr. Flint was made chairman of the committee.

The Secretary read the following telegram, received from Dr. Samuel W. Gross, addressed to the Association: "Your resolutions and extract from the President's address were received too late. Accept the warm thanks of the family with great tenderness and consideration."

The communication was, on motion, ordered entered upon the minutes.

The Secretary announced the following

COMMITTEE ON NOMINATIONS:

Jerome Cochrane, Alabama; P. O. Hooper, Arkansas; G. L. Porter, Connecticut; F. W. Hatch, Sr., California; Jesse Hawes, Colorado; Hector Galloway, Dakota; William Marshall, Delaware; J. W. H. Lovejoy, District of Columbia; R. B. Burroughs, Florida; W. F. Holt, Georgia; E. P. Cook, Illinois; Thomas B. Harvey, Indiana; H. C. Huntsman, Iowa; F. F. Dickman, Kansas; W. H. Wathen, Kentucky; T. G. Richardson, Louisiana; F. C. Thayer, Maine; J. F. Lynch, Maryland; Charles A. Savory, Massachusetts; H. F. Lester, Michigan; D. Leasure, Minnesota; B. A. Duncan, Mississippi; N. F. Essig, Missouri; S. D. Mercer, Nebraska; Joseph Parrish, New Jersey; C. G. O'Hagan, North Carolina; J. W. S. Gouley, New York; J. W. Parsons, New Hampshire; W. M. Beach, Ohio; J. B. Murdock, Pennsylvania; James H. Eldridge, Rhode Island; William H. Huger, South Carolina; Duncan Eve, Tennessee; J. H. Pope, Texas; Alexander Harris, Virginia; George Beard, West Virginia; William

Fox, Wisconsin; H. D. Holton, Vermont; N. L. Bates, U. S. Navy; J. R. Smith, U. S. Army; Walter Wyman, U.S. Marine Hospital Service.

The President announced the following committees:

COMMITTEE ON THE PRESIDENT'S ADDRESS.

N. S. Davis, Illinois; W. W. Dawson, Ohio; W. T. Briggs, Tennessee; T. F. Prewitt, Missouri; J. L. Cabell, Virginia; H. B. Ransom, Iowa, and D. W. Stormount, Kansas.

COMMITTEE ON INTERNATIONAL MEDICAL CONGRESS.

J. S. Billings, District of Columbia; L. A. Sayre, New York; I. Minis Hays, Pennsylvania; A. W. Foster, Massachusetts, and H. F. Campbell, Georgia.

MEDICAL SERVICE ON PASSENGER-VESSELS.

Dr. A. N. Bell, of New York, chairman of the committee appointed last year, reported progress, and read the bill now before Congress. The report showed that the rate of mortality for four years ending 1883 was much greater than for four years ending 1873, and the causes were included in two words, "negligence" and "filth."

Dr. Foster Pratt, of Michigan, moved that the report be accepted, and the committee continued, to report at the next meeting of the Association.

Dr. P. D. Keyser, of Philadelphia, and Dr. J. A. Irwin, of New York, pointed out some of the defects of the bill, especially those which make it inoperative by the fact that the medical officers are not required to report to an independent body. Further remarks were made by Dr. Gihon, U.S.N., and Dr. Jones, in favor of the report.

The motion was adopted.

Dr. Pratt then offered the following, which was adopted:

"*Resolved*, That the American Medical Association urge upon Congress, through their respective Committees on Commerce, the necessity of suitable and efficient legislation to promote the well-being of immigrants to this country, and to protect the public health."

ADDRESS ON PRACTICE OF MEDICINE.

The Association then listened to the address of Dr. John V. Shoemaker, of Philadelphia, chairman of the Section on Practice.

The first topic to which the lecturer directed attention was the all-absorbing question of the relation of nerve-organisms to disease. He reviewed the history of the bacillus tuberculosis, gave the present status of the question, and referred to the divided state of the professional mind on the question of the contagiousness of phthisis.

The knowledge of nervous diseases he declared was steadily advancing; the localization of cerebral functions has aided somewhat in surgery and in diagnosis. Locomotor ataxia

now presents in its chronic stage three diagnostic points,—that of Duchenne, or posterior sclerosis proper; secondly, diffuse sclerosis of cord and medulla oblongata; and a third, made up of ataxia of the periphery.

In treatment of typhoid fever he recommended cold baths. Alluding to renal diseases, he said that albuminuria has long been the subject of scientific inquiry, being considered more and more of nerve-origin. Its close relation to diabetes, with mutual interchange in certain affections, has brought forward the proposition that both albuminuria and glycosuria may be produced by irritation of certain parts of the floor of the fourth-ventricle. The hypertrophy of the muscular coat of the arterioles, and the increased tension of the vascular system, are also claimed to be due to irritation of the vaso-motor centres of the medulla. The latter especially has proved valuable in modifying the treatment of albuminuria. That the toxic influence of certain substances, as well as severe febrile affections, is productive of albuminuria, is well known, and a recent instance has been cited where it occurred after varicella. Peptonuria has been investigated and found to coexist with suppuration from various causes, or with large exudations. Speaking of the disease known as actinomycosis, and as being peculiar to horses and cattle, he stated that it had been exhibited by Treves in a man whom he brought before the London Pathological Society. All stages of the disease, from minute solid growths to large suppurating and sloughing masses, were present.

He thought it necessary, in consequence of the grave accusation cast against American pork by some of the European authorities, that he should say a few words upon the subject. He said that trichinosis is with us a very rare disease indeed in comparison to its frequent occurrence in Continental Europe. In spite of the prohibitive edict against our pork in Germany, quite an endemic of trichinosis has prevailed there of late. As there have been isolated cases reported with us, he would refrain from any attempt at defence, but would simply remark that the mortality from trichinosis in this country, in comparison with Germany, would lead us most certainly to discriminate in favor of our product over the foreign, even if we do not attribute our comparative immunity to the more civilized manner in which we partake of it than the semi-barbarous fashion of eating it uncooked. French physicians, in the Academy of Medicine of Paris, have already given their opinion that American pork is not as dangerous as the trichinophobists would have us believe, and recommend that the prohibition upon its importation be removed.

After discoursing of other interesting matters, particularly on the subject of cholera and yellow fever, he turned his attention to the subject of therapeutics, and remarked

that while in past years they were ignored to a great extent by many physicians and scientists, they have undoubtedly now assumed new features entitling them to a prominent position. Entering into details, he gave a list of some of the permanent remedies which have found approval during the past year, such as kairine among the antipyretics; paraldehyde, a substance isomeric with aldehyde; the *Abrus precatorius*, the jequirity bean of Brazil; the salts of nickel, and especially its bromide; the bismuth salicylate; nitro-glycerin; and the chloride of gold and sodium, etc.; in connection with them mentioning the diseases to which they were applicable. Treating of antiseptic inhalations, he claimed that the vast research in the field for micro-organisms as causative elements of disease, and the discoveries made therein, have given a new impetus to antiseptic treatment in every branch and affection. Antiseptic inhalations for pulmonary disease have proved of value, whether the germ theory be sustained or not.

In concluding his address, he directed the attention of those entering the profession to the necessity of thoroughly mastering the details of all its different branches—above all, that of general medicine—before entering into any specialty, and spoke of the desire on the part of a few to form exclusive organizations, which, he argued, were highly detrimental, and denounced them severely, saying that medicine, “to be beneficial to humanity, must be open to one and all, and if its practitioners are to be excluded from medical societies and their meetings, not from a lack of knowledge and good standing, such societies have outlived their usefulness. Special studies may be made by physicians in certain directions, but the advantages of their research and study must be verified by their practical demonstration through the general practitioner. Without a thorough knowledge, specialism avails little. This powerful organization should represent every branch and specialty of medicine, and its knowledge should be open to all its members. We are all entitled to the benefits derived from associated investigations. Outside organizations on special subjects will detract from the interest and advantages of our meetings, and the younger members, neglecting the general subject of medicine, dazzled by the apparent brilliancy of a select few, will wander forth, to ultimately destroy their own usefulness. The American Medical Association is the representative body of the medical profession of this country, and has been organized and conducted by gentlemen who have grown gray in its service, and whose brows are adorned with chaplets most worthily won, not only at home but abroad. It is for them, and for you, my fellow-members, to control the means of disseminating our science, and not for a few who, at best, only form but a spoke in the wheel of the triumphant chariot

of our science. Our young men should learn from you that knowledge must come to them by the co-operation of their professional brethren from all parts of our country rather than from a few who, in their exclusiveness, set themselves above the active members of the greatest and most humanitarian of all professions.”

The address was referred to the Section for discussion.

Drs. Bottsford and Steens, delegates from the Canada Medical Association, were introduced, and made honorary members, the President welcoming them on behalf of the Association.

ADDRESS ON GYNÆCOLOGY.

Dr. T. A. Reamy, of Cincinnati, Ohio, next delivered the address as chairman of the Section on Obstetrics and Diseases of Women.

He took for his theme the notes of two hundred and thirty-one cases of the operation for laceration of the cervix uteri without a single death.

In six of the cases, peri- or para-metritis with general peritonitis occurred. In three of these the symptoms were sufficiently severe to cause material delay in complete recovery. In one of the cases among the three, para- and peri-metritis and general peritonitis were so severe that the patient was confined to her bed for three months, but ultimately made a good recovery. In one hundred and seventy cases the laceration was bilateral; in thirty-eight cases unilateral. Of the latter, twenty-three were on the left side and fifteen on the right side. In sixteen cases the laceration was stellate; in five cases, of the posterior lip only; in two, of the anterior lip only. In eighty cases the laceration was extensive. In fifteen of these it extended to the cervico-vaginal junction on both sides; and in twenty-two of the cases of bilateral laceration the injury extended to the cervical junction on one side only. In one hundred and sixty-seven cases there was perineal laceration sufficient to leave deformity. In fifteen cases the anal sphincter was damaged; and in seven cases the recto-vaginal septum was opened up. In fifty cases he also operated on the perineum after recovery from the cervical operation.

He did not hesitate to curette the uterus at the time of operating on the cervix, or to resort to it, if necessary, immediately with perineorrhaphy. He caused a stream of hot water to flow over the parts continuously during the progress of the operation, and never used sponges. He had not employed ligature or tourniquet for controlling hemorrhage, but allowed free bleeding from the denuded surfaces, because it softened and thus promoted absorption of the hardened tissues, and facilitated puncture with the needle carrying the sutures. To promote this absorption he regarded as an important factor in starting the process of involution. Hot water had taken the place of other hemo-

statics, but he sometimes had to withhold it, in order to obtain sufficient bleeding to soften the parts before the ligatures were introduced.

The usefulness of trachelorrhaphy could scarcely be overestimated. If the operation be properly done, it favored fertility, and often cured sterility. He objected to catgut ligatures for sutures.

In performing the operation he uses a single volsella to draw the uterus down gently (for fear of inflammatory complications), then outlines the denudation with a sharp knife, and removes the tissue with scissors. He uses curved needles, with Chinese silk, and washes out the cervical canal at the close of the operation with a recurrent-flow syringe, and then allows the patient to rest until the sixth day before the vagina is washed out again. Cleanliness was the only antiseptic employed.

The paper was referred to the Section on Obstetrics, etc., for discussion.

A series of resolutions from the Section on Ophthalmology, with reference to the death of Prof. Gross, was ordered to be entered upon the minutes.

Dr. Henry H. Smith offered a resolution establishing a permanent committee of seven, to be known as the Committee on Experimental Medicine of the American Medical Association, charged with the duty of opposing by all legitimate means any proposed legal interferences with the progress of medical science by experimentation upon animals, as unwise and ill-considered legislation.

The President appointed Drs. Horatio C. Wood, William Pepper, and James Tyson, of Philadelphia; Christopher Johnson, of Maryland; John C. Dalton and Austin Flint, Jr., of New York; and J. S. Billings, U.S.A.

Dr. Atwood offered a resolution with regard to the abuses of medical college advertising, which was referred to the Judicial Council.

Dr. Benjamin, of Camden, New Jersey, offered a resolution urging upon medical colleges the importance of a preliminary examination and a three years' graded course prior to graduation.

After an excited discussion, the resolution was adopted.

Third Day, Thursday, May 8.—The President called the Association to order at 10.30 A.M. Prayer was offered by the Rev. Dr. Paret.

On motion of Dr. Keller, of Arkansas, the Secretary was authorized to correct his records so that the resolution adopted last year leaving the date of meeting to be selected by the Nominating Committee should appear on the minutes.

Drs. E. T. Ferguson, New York; W. T. Briggs, Tennessee; J. E. Reeves, West Virginia; T. F. Prewitt, St. Louis; George Peck, U.S.N.; Thomas Russell, Missouri, and D. W. Stormount, Kansas, were appointed by the President a committee to select additional

members of the board of trustees for the *Journal*.

Dr. George M. Sternberg, U.S.A., offered a resolution that, whereas the knowledge necessary for the prevention of infectious and pestilential diseases has not yet been obtained, *Resolved*, that a committee of five be appointed to petition Congress to make suitable appropriations for the prosecution of scientific researches relating to the cause and prevention of infectious diseases of the human race, under the direction of the National Board of Health. The resolution was adopted, and the following committee was appointed: Drs. George M. Sternberg, U.S.A.; I. M. Hays, Philadelphia; A. L. Gihon, U.S.N.; James E. Reeves, West Virginia; John C. Dalton, New York.

A resolution was presented by Dr. Keller, of Arkansas, to the effect that in a few years the cremation of the dead would be regarded as a sanitary necessity, that the decision of the courts had pronounced this method legal, and that from hygienic, religious, and sentimental stand-points this method of disposing of the remains of the dead was the best. Dr. Keller said that the remains of the late Dr. Gross were now on their way to be cremated, and asked for the adoption of his resolution. The chair ruled that the resolution was out of order, because it introduced new business.

The committee appointed to consider a resolution inviting the International Medical Congress to meet in this country in 1887 reported, through their chairman, Dr. Billings, a recommendation that a committee of seven (including the President, Dr. Flint) be appointed to invite the Congress to meet in Washington, and, if the invitation be accepted, that this committee act as the executive committee of arrangements, with power to add to their number, and be authorized to draw from the funds of the Association an amount not exceeding five hundred dollars for preliminary expenses. Adopted.

REPORT OF TRUSTEES.

Dr. Toner, from the board of trustees for journalizing the proceedings of the Association relative to the official *Journal*, submitted a report, and said that the weekly issue now published was 3800, and that the receipts this year, after paying all expenses, showed a surplus of five hundred dollars. The total income had been \$18,547.50. The editor had offered to resign, but had consented to serve one year longer.

Dr. N. S. Davis, editor of the *Journal*, stated that the paper was on a sound business and financial basis.

Before action was taken upon the report, Dr. Packard read his minority report, in which he criticised the literary and scientific character of the *Journal* and recommended that the resignation of the editor should be accepted, and that its publication-office be removed to some Eastern city. A motion to

lay the minority report upon the table was carried, and the majority report was adopted.

OFFICERS FOR 1885.

Dr. Hooper, of Arkansas, chairman of the committee on nominations of officers of the Association for the ensuing year, submitted the names of the following, who were declared elected: President, Henry F. Campbell, Georgia; First Vice-President, John S. Lynch, Maryland; Second Vice-President, S. D. Mercer, Nebraska; Third Vice-President, J. W. Parsons, New Hampshire; Fourth Vice-President, H. C. Ghent, Texas; Secretary, W. B. Atkinson, Pennsylvania; Assistant Secretary, W. H. Watkins, Louisiana; Treasurer, R. J. Dunglison, Pennsylvania; Librarian, D. C. H. Kleinschmidt, District of Columbia.

Judicial Council to fill vacancies—J. K. Bartlett, Wisconsin; John Murphy, Minnesota; J. M. Toner, District of Columbia; W. Brodie, Michigan; H. D. Holton, Vermont; A. B. Sloan, Missouri; D. A. Ulrich, Pennsylvania; W. M. Beach, Ohio.

The new officers of the Sections are as follows: Practice of Medicine, H. Didama, New York, Chairman; G. M. Garland, Massachusetts, Secretary. Obstetrics and Diseases of Women, R. S. Sutton, Pennsylvania, Chairman; J. T. Jelks, Arkansas, Secretary. Surgery and Anatomy, Duncan Eve, Tennessee, Chairman; C. B. King, Pennsylvania, Secretary. Ophthalmology, Otolaryngology, and Laryngology, J. A. White, Virginia, Chairman; Eugene Smith, Michigan, Secretary. Diseases of Children, J. H. Pope, Texas, Chairman; S. S. Adams, District of Columbia, Secretary. State Medicine, E. W. Shaufler, Maryland, Chairman; J. M. McCormick, Kentucky, Secretary. Oral and Dental Surgery, A. W. Harlan, Illinois, Chairman; J. E. Mears, Pennsylvania, Secretary.

Place of meeting, New Orleans, on the last Tuesday in April, 1885.

Additional Trustees of *Journal*, H. F. Campbell, Georgia; J. H. Packard, Pennsylvania; L. Conner, Michigan. Necrology, J. M. Toner, District of Columbia, Chairman.

Dr. N. S. Davis, chairman of the Committee on Meteorological Conditions and their Relations to the Prevalence of Diseases, read a report upon that subject; also upon collating the investigations of diseases in co-operation with the committee of the British Medical Association. The latter subject was, upon motion, referred to a special committee.

A report of the Judicial Council was submitted, in which Dr. S. S. Goode's application for admission as a delegate from the Somerset, Pa., Medical Society was refused, as this Society is not recognized by the Pennsylvania State Medical Society. The Council declined to reopen the case of Dr. D. W. Day. In the case of Dr. H. G. Sherman, of Cuyahoga County, Ohio, the protest had been withdrawn.

ADDRESS ON SURGERY.

Dr. C. T. Parkes, chairman of the Section on Surgery, read his address by title: "Effects and Results of Operation for Relief of Gun-shot Wounds of the Small Intestines."

The address of Dr. J. Deering Roberts, the chairman on State Medicine, was deferred until the next day.

Fourth Day, Friday, May 9.—The Association was called to order at 9.30 by the President.

Dr. Dalton, of New York, reported, from the committee appointed for the purpose on the second day of the meeting, the following:

"*Resolved*, That the Committee on Experimental Medicine be empowered and instructed to add to its numbers and efficiency by the election of associate members from different States, and that it report to this Association at its annual meeting any matters relating to the subject of experimental medicine which may need the consideration or action of the Association.

"*Resolved*, That, in view of the attempts which have been or may be made to obstruct by restrictive legislation the progress of experimental medicine, this Association desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical science; that it is the means by which many valuable discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly intrusted only to members of the medical profession; and that its restriction or prohibition by law would inevitably retard the advancement of medical science and the improvement of the medical art."

Unanimously adopted.

The committee appointed to prepare suitable resolutions upon the death of Prof. Gross, ex-President of the Association, reported progress, and asked to be allowed to publish their report, when complete, in the *Journal* of the Association.

Dr. Davis, from the special committee on the recommendations contained in the President's address, reported that no action is necessary upon the ethical portion of the address, and offered a resolution that a committee of five be appointed (of which Prof. Flint shall be one) by the chair, to report at the beginning of the next meeting what further action in the premises shall be taken by the Association.

The Committee on Nominations reported a change, as follows: Section of Oral Surgery, Wm. W. Allport and E. C. Briggs.

In the Section on State Medicine, Thomas Antisell was named as the member of the Section from the District of Columbia. J. E. Chancellor, of Virginia, declining his appointment on same Section, it was accepted.

ADDRESS ON STATE MEDICINE.

Dr. J. Deering Roberts, of Nashville, chairman of the Section on State Medicine, read an

address on Progress in Hygiene and State Medicine. At the outset the lecturer dwelt upon the importance of investigation into the causation of disease. The recent investigations into the etiology of disease and the germ theory give great promise of future control over epidemic disease, and he awarded the credit of the first announcement of the germ theory of intermittent fever and cholera to a Tennessee physician thirty-five years ago.

The question of State interference in matters of State medicine was next discussed, and he deprecated any such control. The high position of American modern medicine the speaker attributed to untrammelled competition. Free speech, free press, and free medical education were lauded as important to further progress.

In conclusion, the speaker advocated the establishment of a National Bureau of Health, the chief of which shall sit in the Cabinet, as an equal officer, to consider all questions of international hygiene and State medicine.

At the conclusion, Dr. W. A. Coop, of Friendship, Tennessee, entered his individual protest against the "free and easy" medical education advocated by the reader of the address.

The address was ordered to be published.

The President announced the following as the Committee on the Sessions of International Medical Congress of 1886: Austin Flint, New York; I. Minis Hays, Philadelphia; L. A. Sayre, New York; George J. Engelmann, St. Louis; J. M. Brown, United States Navy; J. S. Billings, United States Army; and the President-elect, Henry M. Campbell, of Augusta, Georgia, member *ex officio*.

Dr. John H. Packard called up amendments from the table with regard to increasing membership by application, without the privilege of voting, in order to increase the income of the Association by increasing the number of contributing members.

The objection was made by Dr. Toner that this amendment had not been offered at the last meeting, and therefore could not be acted upon at this meeting. Dr. Kinloch claimed that the amendment had been before the Association and was merely laid upon the table, so that it could be brought up at any time. Dr. Toner moved that the subject be revived and brought up at the next meeting. Adopted.

Dr. Keller requested that certain resolutions which he had offered with regard to cremation be referred to the Section on State Medicine. Adopted.

Dr. J. Foster Pratt moved that each Section be empowered to choose its own chairman and secretary. Laid over as an amendment.

He also moved that the editor of the Journal of the Association be directed to publish the minutes of this meeting in pamphlet form, and distribute them at the next meeting. Adopted.

Dr. Brodie moved that delegates be permitted to register in advance of the next meeting, and that the Secretary post a list of the

members present in the meeting-hall, with their city addresses. Adopted.

Dr. Roberts, from Section on State Medicine, offered resolutions with regard to the establishment of a National Bureau of Medicine and Sanitary Science, which were adopted.

Dr. Cochran offered the following:

"Resolved, That it is not expedient for the Nominating Committee to choose its own members as officers for the Association."

On motion, this was laid on the table until the next meeting.

The chairman of the Section on State Medicine reported favorably upon a resolution offered by Dr. J. Foster Pratt, memorializing Congress to adopt suitable measures by which foreign defective classes should be excluded from American soil. This was unanimously adopted.

Dr. Garnett, chairman of Committee of Arrangements, moved that the addresses be read by abstract only, and referred for publication. Adopted.

ADDRESSES READ IN ABSTRACT.

Dr. J. F. Chisolm, chairman of the Section on Ophthalmology, Otology, and Laryngology, said that his address was not a review of his department during the past year, but was intended more particularly to call the attention of the general practitioner to some well-established facts in ophthalmology which should be appreciated by the profession at large.

Dr. F. W. Brophy, of Illinois, chairman of the Section on Oral Surgery, said that, in addition to certain evidences of progress in oral surgery, he had endeavored to direct attention to more knowledge upon the subject by the general practitioner; and advised the establishment of professorships of dentistry in the medical colleges.

Dr. Lee, of Baltimore, chairman of Section on Diseases of Children, gave an abstract of his address upon Zymotic Diseases in Children.

He confined his consideration to the advances and discoveries made in the study of contagious and infectious diseases as they occur in children. At the outset, he referred to the establishment of the *Archives of Pediatrics* in this country as an indication of increasing interest in this department of medicine, which has been further signalized by the establishment, by the British Medical Association, of a Section on Diseases of Children, at its last meeting.

For the treatment of diphtheria, the lecturer endorsed the method of Dr. James Reed, of Savannah, Georgia:

R Resorcin, gr. xxiv;
Acid. tannici, ʒj;
Acid. salicylici, ʒiv;
Acid. bori, ʒij;
Flor. sulphuris, ʒss. M.

A small quantity of this is to be placed upon the base of the tongue every two or three hours. At the same time resorcin is administered in-

ternally, and it is claimed that it acts better than quinine as a germicide. It is important to differentiate simple croupous angina from true diphtheria: the fact of the disease extending to the velum and posterior pharyngeal wall would make it very probably a case of diphtheria, which is rendered a certainty if the exudation extend into the nose.

The lecturer also referred to the treatment of diphtheria with the bichloride of mercury (grain j to water ℥iv), used as a gargle, and a teaspoonful to be swallowed every two hours, the remedy to be kept up for a week, its use to be regulated by its effects. Dr. Selden has treated two hundred cases of angina of the tonsils and fauces (on the supposition of being the preliminary stage of diphtheria) with cyanide of mercury (1 cgm. in water 100 g.), giving two teaspoonfuls every hour day and night. As adjuncts to this treatment he employed ice locally and free stimulation.

The close relationship of scarlatina and diphtheria was next considered, and cases quoted where the two diseases were apparently evolved from a common cause. The incubation period for scarlatina has been found to be as brief as three days (Yonge Smith, *British Medical Journal*, 1883). In the treatment the antiseptic effect of cold baths was favorably spoken of. Lichtenstern gives five contra-indications to their use: cardiac collapse, laryngeal stenosis, inflammatory swelling and infiltration of the cellular tissue of the neck with venous obstruction, hemorrhagic tendency, and the existence of poly-articular synovitis or tendonitis, in which the slightest movements are painful. Sodium salicylate, and stimulants in the form of wine, were recommended, with attention to nourishment.

Cerebro-spinal fever is an infectious disease which is more likely to occur in males than in females, and particularly are those children susceptible who worry over their studies. The disease being constitutional with meningitis as a local expression, general and local measures are both required. Ice-cap, hot mustard foot-baths, and, internally, ergot and bromides, with chloral to relieve headache and restlessness, have given good results.

Typhoid fever, while sufficiently common in young children to require notice, yet runs a more favorable course than in adults. The symptoms are slight, the special complications being pneumonia and bronchitis. Hygienic treatment is only required, except for the purpose of lowering temperature.

The parasitic character of measles was considered as established by Dr. Keating's and Dr. Formad's researches. In the treatment of malignant cases alcohol, and in milder cases stimulating expectorants and diaphoretic mixtures, with quinine, were recommended.

Variola, vaccinia, and mumps were also briefly considered in the light of recent com-

munications upon these subjects. Infantile diarrhœa was also spoken of as a constitutional affection rather than as a digestive disorder, and possibly, even if remotely, allied to the infectious diseases. Erysipelas is a disease which may occur in infancy; frequently it has a traumatic origin. In the treatment of whooping-cough ergot was highly endorsed, especially in subacute bronchial cases. If there is much febrile disturbance, aconite should first be used.

MISCELLANEOUS BUSINESS.

Dr. J. M. Toner, chairman of the Committee on Necrology, reported that instead of waiting for the annual report he had published obituary notices in the *Journal* as he received them. On motion, the plan was approved and adopted.

Minutes were received from the secretary of the Section on Surgery and Anatomy. On motion of Dr. Atkinson, the secretaries of other Sections were authorized to send their minutes directly to the editor.

The Section on State Medicine reported resolutions in favor of elevating the standard of medical education. In order to secure uniformity in medical requirements, it was urged that the members of this Association be requested to use their influence with State boards, etc. Adopted.

The Treasurer, Dr. R. J. Dunglison, reported a balance on hand of \$2212.07. The increased receipts of last year he attributed to the influence of the *Journal* in getting subscribers and advertisements. He also called attention to the misconception in the minds of some members that their dues need only be paid once in three years to maintain membership.

Dr. Brodie moved that it is the sense of this meeting that the annual dues must be paid each year in order to retain permanent membership in the Association. Adopted.

The Librarian's report was then received, adopted, and ordered to be printed.

Dr. J. C. Green, of Buffalo, offered a series of resolutions calling attention to the fact that the third volume of the "Medical and Surgical History of the War" had not yet been printed, and that the first two volumes were out of print, and petitioning Congress to issue a uniform edition in three volumes, to be sold at cost, with the usual ten per cent. addition. Adopted.

Dr. Carl Seiler gave notice of a proposed amendment, dividing the Section on Ophthalmology, Otology, and Laryngology into two Sections,—one on Ophthalmology, and the other on Otology and Laryngology.

Dr. William Beach, of Ohio, offered resolutions declaring it to be the opinion of the American Medical Association that it is important for Congress to adopt, at the present session, proper legislation for the extermination of the disease among animals known as

pleuro-pneumonia, and that a committee be appointed to bring the matter before the committee of the House of Representatives now having the bill in charge. Adopted.

Dr. H. F. Campbell, the President-elect, was then escorted to the chair, and acknowledged the honor, which had been rendered greater by having such an illustrious predecessor as Prof. Flint.

Resolutions of thanks were passed to the postmaster for establishing a branch post-office at the Hall, and to the railroads, institutions, and citizens who had contributed to the success and pleasure of the meeting.

A resolution offered by Dr. Von Klein, of Ohio, to abolish the custom of opening the sessions of the Association with religious exercises, was unanimously laid upon the table.

On motion of Dr. Ott, of Pennsylvania, the attention of Congress was called to the contracted and unsafe accommodations for the Army Medical Library and Museum, and the need of a fire-proof building again pointed out.

Dr. Von Klein moved that the next issue of the Journal of the Association be draped in black in honor of Prof. S. D. Gross. Referred to committee having in charge the resolutions upon the death of Prof. Gross.

Dr. Leasure moved that it is the sense of the Association that members are not allowed to use their titles as members of this organization in testifying to the value of mineral waters and proprietary medicines. Adopted.

A communication from the West Philadelphia Medical Society with regard to the Code of Ethics, and endorsing the same, was referred to the Judicial Council.

Dr. Daniells, of Texas, offered a resolution calling attention to the danger of the use of caustic potassa and lye among families, and to the necessity of such preparations being labelled and treated as poisons. Adopted.

A communication from the New Jersey State Medical Society, containing a schedule for preliminary education, was, on motion, referred to the Publication Committee.

A communication was read from the Missouri State Medical Society with regard to the frequent advertisements of medical colleges containing the names and subjects lectured upon by the different members of the faculty. Referred to the Judicial Council.

The President announced the following appointments:

Delegates to the Canada Medical Association, Drs. Brodie and Walker, of Michigan, and W. S. Tremaine and E. N. Buck, of New York.

Delegate to the British Association for the Advancement of Science, Dr. W. Brodie.

Delegates to other Societies abroad, Drs. J. W. S. Gouley, E. C. Harwood, H. D. Didama, C. C. Wyckoff, F. Hyde, N. C. Husted, G. T. Stevens, and J. C. Hutchinson, of New York; S. C. Gordon and T. L. Estabrook, of Maine; A. J. Jones, E. M. Dent, and J. F.

Gabriel, of Virginia; C. E. Vaughn and H. O. Marcy, of Massachusetts; H. P. C. Wilson, of Maryland; D. W. Prentiss, L. Friedreich, and S. C. Busey, District of Columbia; J. M. Browne, United States Navy; J. S. Billings, United States Army; Edward Boerck, of Missouri; T. J. Gallaher, A. M. Pollock, John V. Shoemaker, N. A. Hobday, and W. H. Daly, of Pennsylvania; C. Deveny, of Illinois; C. Johnson, of Maryland; H. F. Campbell, of Georgia; and by special resolution the name of Austin Flint, of New York, was added to the list.

Dr. Knott, of Texas, offered a resolution of respect to the memory of J. Marion Sims. Owing to the introduction of the following resolution, by oversight, no vote was taken upon Dr. Knott's resolution.

Dr. A. L. Gihon offered a resolution that this Association commemorate its meeting in Washington by erecting a statue to Dr. Rush, of Pennsylvania, the father of American medicine, and that a committee of five be appointed for this purpose. Adopted.

On motion of Dr. Garcelon, of Maine, a vote of thanks was tendered to Dr. Austin Flint for the manner in which he had presided over the deliberations of the meeting. The vote was put by Dr. Atkinson, and unanimously carried. The Association then adjourned *sine die*.

SECTION ON THE PRACTICE OF MEDICINE.

JOHN V. SHOEMAKER, M.D., of Philadelphia, Chairman; E. G. WILEY, M.D., of Sandy Hook, Connecticut, Secretary.

A paper on "Simulation of Pathognomonic Signs and Symptoms" was read by Dr. E. G. Janeway, of New York. The object of the paper was to call attention to mistakes that are likely to arise from interpretation of morbid signs, and he showed in illustration the change in diagnostic value which had occurred within a few years in some prominent symptoms. Choked disk now simply means *increased intracranial pressure*, not necessarily by a new growth, as was once thought. Tremor does not indicate *multiple sclerosis* unless other causes, such as alcoholism or metallic poisoning, be excluded. Coma with a temperature low at first and afterwards elevated is a very positive sign of *hemorrhage* into the brain. Some pulmonary signs, as vocal fremitus and bronchial breathing, may occur in *pleurisy* as well as in *pneumonia*. Tumors pressing upon the aorta sometimes give rise to double murmur, often mistaken for aneurismal bruit. Dyspnoea, often supposed to be cardiac, may be due to Bright's disease. In conclusion, he stated that the presence of albumen and hyaline casts may be unconnected with renal disease.

Dr. Austin Flint, of New York, then read a paper on "The Clinical Study of the Heart-Sounds."

He divided the heart-sounds into five dis-

tinct sounds, two of which were diastolic and three systolic. The diastolic sounds are the aortic and pulmonic, being made at the corresponding valves. The systolic sounds are the mitral, tricuspid, and sound of impulsion produced by the impulse of the heart against the chest-wall. The booming character of the first sound is due to the impulse. This is heard with the greatest intensity at the apex. The mitral sound is heard a little to the left of the apex, while the tricuspid is heard to the right.

The writer next considered the significance of alterations in the character of each of these sounds. Incompetency of the aortic valve is generally, if not invariably, represented by a regurgitant murmur. This simply shows incompetency, without giving any idea as to the amount. This is to be determined from other points, particularly by a comparison with the power of the left ventricle, as shown by the sound of impulse. Abnormal increase in the intensity of the aortic sound is referable to two causes: 1, increased power of the systole of the left ventricle; 2, increased blood-pressure in the systemic arteries. Experiments have been made which tend to show that increasing the blood-pressure has no effect on the aortic sound. The intensity of the pulmonic sound is increased by increase of the blood-pressure in the pulmonic arterial system. Insufficiency of the mitral valve is represented by a murmur, which simply denotes insufficiency, without giving information as to its amount. The sound of impulse furnishes this. The sound of impulse is increased in cardiac hypertrophy and diminished or absent in weakness of the ventricular systole. Alterations in the tricuspid sound are not of much importance, on account of the rarity with which this valve is attacked by disease. Hypertrophy of the right ventricle intensifies it. The position of these various murmurs was indicated by diagrams.

A paper on "Dermatitis Herpetiformis" was then read by Louis A. Duhring, M.D.

Under the name of dermatitis herpetiformis, the author proposes to group a number of cases of a rare disease of the skin which he has met with from time to time, having some features in common with several well-known diseases, notably herpes, pemphigus, and eczema, but which nevertheless, is distinct from these affections. It manifests itself by the formation of erythematous patches of an urticarial or erythema-multiforme-like character; variable-sized, irregularly-shaped or stellate, flat or raised, more or less grouped, herpetic vesicles; blebs of similar character; pustules, flat or acuminate, whitish in color, with a more or less inflammatory base; and papules, vesico-papules, and variously-sized, circumscribed infiltrations, all the lesions inclining to assume an herpetic character (taking herpes zoster as the type of eruption), accompanied with

violent itching. One or another of these varieties of lesions may be present alone, or, as often happens, they may appear together as a mixed or multiform eruption, or the several forms may succeed one another during an attack or as a subsequent relapse. The disease is remarkable for the multiformity of lesion. Thus, it may be divided into the erythematous, papular, vesicular, bullous, pustular, and multiform varieties. This protean and multiform nature of the disease has been previously pointed out by the author in the second edition of his *Treatise on Skin Diseases* in considering the "impetigo herpetiformis" of Hebra, which represents the pustular variety of dermatitis herpetiformis according to Dr. Duhring.

The erythematous variety bears some resemblance to urticaria, and especially to erythema multiforme, the variegation in color and pigmentation calling to mind the latter affection, but the course of the disease is chronic, this variety usually giving way sooner or later to three forms of eruption.

The vesicular variety is of more frequent occurrence, the lesions varying in size from a pin-head to a pea. They are usually flat, irregularly-shaped, angular, glistening, pale-yellowish, firm, and, as a rule, are unaccompanied by areolæ. They are aggregated, or occur in little clusters of two or three, and may coalesce. The eruption is usually profuse, and, as a whole, is generally disseminate. In chronic cases there is considerable pigmentation. The itching is intense. Dr. Duhring regards this variety of the disease as being probably identical with the "herpes gestationis" of some authors.

The bullous variety shows blebs having general characters like the vesicular variety, and is liable to be mistaken for pemphigus.

The pustular form exhibits itself in variously-sized rounded or flat, usually tense, whitish pustules, resembling impetigo and ecthyma. They incline to flatten and spread on the periphery, crusting in the centre. They possess, usually, "angry-looking" areolæ, have a "drawn-up" or "puckered" appearance, and, like the other lesions, tend to be angular in outline. They incline to form in groups of two or three or more, which may coalesce. The grouping is further peculiar in that the central pustule will often be immediately surrounded by a variable number of smaller (pin-point or pin-head sized) pustules, sometimes in a circular form, as in herpes iris. But this arrangement is not constant. This variety of the disease has been described by Hebra under the name of "impetigo herpetiformis."

In all the varieties of dermatitis herpetiformis there is a disposition for the lesions to manifest themselves in patches or in groups, taking on an herpetic character, and to extend about the periphery. A variable amount of constitutional disturbance is pres-

ent, especially with each new outbreak. The itching and burning are violent. The disease shows a marked tendency to appear in crops and moreover to relapse, its course often extending over years. All regions are liable to invasion. It occurs in both sexes, and usually in early adult or middle life. It is often met with during the parturient state, and is a serious disease, the pustular variety being especially grave. It is very rebellious to treatment. It is a neurotic manifestation. The author has encountered fifteen cases.

The author concluded his paper by giving the following résumé:

1. The existence is shown of a distinct, clearly-defined, rare, serious, herpetic disease of the skin, manifesting itself usually in successive outbreaks, characterized by more or less systemic disturbance, a variety of primary and secondary lesions, and severe itching and burning.

2. The disease is capable of appearing in many forms, having a tendency to run into one another irregularly, the principal varieties being the erythematous, vesicular, bullous, and pustular, which may occur singly or together in various combinations.

3. The disease is protean in character, and is remarkable for its multimorphy.

4. The pustular variety is the same manifestation as that described by Hebra under the name "impetigo herpetiformis."

5. The term "dermatitis herpetiformis" is sufficiently comprehensive and appropriate to include all varieties of the disease.

6. It may occur in both sexes, and in women independent of pregnancy.

7. It usually pursues a chronic, variable course, lasting years, and is very rebellious to treatment.

"The Etiology of Pericarditis" was the subject of a paper by Dr. John T. Whitaker, of Cincinnati, Ohio. A disease often overlooked because insidious, the lecturer declared rheumatism to be the most important single cause, but the majority of cases are not of rheumatic origin. As to frequency, statistics show it to occur once in seven hundred and twenty-six cases; more frequently in males, in youth, and in those who work hard. Pericarditis is often of mycotic origin, and secondary to systemic infection by micro-organisms, which especially choose the serous membranes.

A paper entitled "Importance of Unity in the Pharmacopœia: A Plea for Greater Interest in the Pharmacopœia by Physicians," by Dr. Prentiss, of Washington, was read by title, and referred for publication.

Dr. Black, of Illinois, read a paper entitled "The Production of Poisons by Micro-Organisms," in which, after an extended review of the subject, he formulated the following conclusions:

1. All cognizable forms of life are dependent upon the products of molecular change in matter for their continued existence.

2. Every cognizable form of life capable of independent existence must have the power of digestion for the preparation of food-material for the nutrition of its material structure.

3. Each living cell must appropriate to its nutrition food-material prepared by a digestive body of its own or by the appropriation of material prepared for it vicariously by some allied living cell.

4. Every living cell must support its life and material structure by a continued imbibition and remolecularization of matter within itself, except during special conditions of rest, as in the seed, egg, etc.

5. Every living cell must, as a result of the remolecularization of matter within itself, throw off waste products of two classes,—a respiratory waste, rich in oxygen, and a urinary waste, poor in oxygen. All waste products are poisonous to the living organism from which they emanate.

6. The natural organic poisons are uniformly waste products of the organisms in which they are formed.

7. Pathogenetic micro-organisms, by their remolecularization of matter, form poisons analogous to the vegetable alkaloids, which are the active agents in the production of disease.

8. While I should not class the digestive ferments, as diastase, etc., as organic poisons, they may act as irritants when applied to another form of life than that which produced them.

9. Normal tissues resist the invasion of the micro-organisms by throwing out matter calculated to destroy them or dissipate or nullify their action, aroused thereto by the presence of an irritant agent given out by the micro-organism.

The last paper of Tuesday's session was read by Dr. Traill Green, of Easton, Pennsylvania, on "The New Official Chlorate."

He regards the chlorate of sodium as far more efficient than the chlorate of potassium. He had been using it since 1866. It is soluble in one and one-tenth parts of water. The doctor mentioned some of the diseases in which he had employed it. It is applicable to all conditions in which the potassium salt has been used. He had employed it in poisoning with the *Rhus toxicodendron* with great satisfaction, bathing the part with a solution of from one to three drachms to the pint of water. For eighteen years he has used no other treatment. A solution of twelve grammes to a litre of water is a soothing application in erysipelas. The caution was given not to allow the cloths saturated with the solution to become dry, because they were readily set on fire. In conjunctivitis a solution of four grammes to five hundred c.c. of water is of service. The sodium salts do not act on the heart, as do the potassium compounds. A section of heart-muscle placed in a solution of potassium salt is soon completely

paralyzed, but if removed and placed in a sodium solution its irritability is regained.

Second Day.—"A Periodical, Painful Affection of the Liver" was the subject of a paper read by Dr. R. Harvey Reed, of Mansfield, Ohio. It was believed to be due to disorder in the liver or its capsule, or both, and possibly a true irritation of the capsule of Glisson. No evidence of inflammation was present.

A paper on "Epilepsy" was then read by Dr. William Pepper, of Philadelphia.

In a purely clinical discussion of epilepsy, our conception of the disease must be a broad one. Strictly, cases of organic disease should be excluded. This is, however, sometimes difficult. There is no trouble in those instances in which the common symptoms of brain-tumor are present, but in those cases in which epilepsy follows sunstroke the distinction is not so clear.

Hysteria should also be excluded. While typical epilepsy and typical hysteria are readily distinguished, yet there are many facts showing their analogy. A case was then quoted of hysteria associated with neurasthenia, apparently dependent upon membranous enteritis, with great prominence of the vaso-motor symptoms and the appearance of crops of stigmata before the attack.

Both epilepsy and hysteria represent conditions of malnutrition, with morbid sensibility and irritability of nerve-tissue, brought about in the most varied manner. In hysteria it would seem that the ganglionic nervous tissue is especially vulnerable, and the gray matter within the encephalon less so, though instability of this may coexist. An attack may be induced through violent disturbance of ganglia controlling intracranial circulation and consequent discharge from unstable gray centre in cortex or elsewhere. Epilepsy would seem to depend upon a supremely unstable condition of one or more areas of the gray matter within the encephalon, rendering it liable to sudden and violent discharges. This instability may be brought about in very varied manners. The most prominent influences are heredity, nervous exhaustion, as from overgrowth, overstrain, or exhausting illnesses, shock, or sudden powerful impressions, as from physical injury, with or without distinct lesion of cranial bones, sunstroke, purely psychical shocks, as from fright, instability of circulation, with disturbed nutrition of the brain, as in heart-disease, and in connection with heart-disease there is a possibility of minute embolisms interfering with the nutrition of small areas, prolonged peripheral irritation, especial reference being made to chronic catarrhal irritation of the gastro-intestinal tract. A consideration of these points teaches that these cases grouped under the name of epilepsy are not afflicted with a single definite disease, but they exhibit in common merely a state of impaired nutrition and morbid instability of the gray matter, varying

greatly in different cases. In some cases there are probably minute molecular changes in the nervous tissue. In a larger number of cases, however, the recurring convulsions are connected, not with irregular advancing morbid tendency or irregularly progressive anatomical change, but with occasional and irregular operation of those widely different causes which are calculated to disturb the weak centre and induce explosive discharges.

The evil effects of habit are prominently exhibited in this disease, so that if the instability cannot be reduced and the provoking causes not removed, the attacks will be more and more readily induced, until they will at last be excited by almost imperceptible causes.

It is important to recognize the degree of instability in these cases. Every one is liable to convulsions; it is merely a question of the provoking cause required. Provoking causes cannot be found in all cases of epilepsy, but the more closely they are sought for the more frequently will they be found. A careful study in this direction is of the greatest importance in every case.

Among the most frequent provoking causes may be mentioned indiscretions in diet or improper food. This may act in different ways by exciting local irritation of the mucous membrane, which will act in a reflex manner, or it may induce a condition of toxæmia from the admission to the blood of imperfectly-elaborated elements, or from the failure of the emunctories to remove some product of malassimilation. In many of the cases seen by Dr. Pepper the attacks bore a close analogy to the spells of vertigo induced in lithæmic patients by indiscretions of diet.

In this connection allusion may be made to the fact that the injection of the non-digestive ferments into the general circulation is capable of inducing serious nervous symptoms, even convulsions and death.

Scarlatina is frequently followed by epilepsy. In some cases this is explained by the tendency to wide-spread tissue-change, so that impaired nutrition of the gray matter might be expected to occur at times. In other cases this disease may act by leaving such a degree of renal insufficiency as will, under comparatively slight causes, lead to toxæmia, from the retention of malassimilated materials. It does not seem necessary that such a condition should reveal itself by the presence of albumen in the urine, although Huppert states (*Archiv für Psychiatrie*, 1877, p. 189) that immediately after an epileptic attack albumen is almost invariably present, and hyaline tube-casts can frequently be found.

In those cases in which the morbid state of the nervous system has been brought about by sunstroke or exposure to excessive heat, it will often be found that attacks will be induced by undue exposure to the rays of the sun, or even to intense light. When the nervous instability is associated with cardiac lesion, I

have frequently noticed that muscular exertion or excitement of the circulation directly induced the attacks. In all cases mental excitement, or too close application, or sexual excess, will favor the occurrence of the seizures. These causes are operative on account of the constitutional susceptibility.

It is often stated that epileptics are in full health. This certainly does not accord with my experience. Careful study has usually shown some derangement or impairment of important functions.

The principles of rational treatment must follow from such considerations as the above. No one plan of treatment is applicable to all, or even to a large majority, but each case requires separate study and a special line of treatment.

The primary cause should be removed if it can be discovered, and the same is true of the provoking cause. The leading principles of treatment are to relieve anæmia, neurasthenia, and morbid susceptibility by diet, change of occupation, change of residence, and rest. Intestinal irritation should be removed, especial reference being made to an absolute milk diet, long continued. Other special forms of diet are required in certain cases. Nitrate of silver is of a particular value in those cases where gastric intestinal irritation is a prominent condition.

Overexertion should be avoided in all cases, and especially in cardiac cases. Excitement and overexertion of mind should also be guarded against.

Counter-irritation should be employed, the best effect being obtained from the actual cautery, and this is of special value in those cases where definite intracranial irritation is suspected, as after insolation. The cautery occasionally exerts a good effect in organic cases.

Trephining is valuable in a considerable number of cases when circumscribed lesion of the cranial bone is suspected.

The removal of genital irritation is important, the question of circumcision being the most important. Its value has, however, probably been overestimated.

It is important to arrest the attacks if possible, for their continuance strengthens the bad habit and renders subsequent attacks more readily developed. The use of the ligature to arrest the aura, nitrite of amyl, and other expedients may be employed. Various drugs are to be recommended, such as the bromides, belladonna, and asafetida, enemata of chloral, iron, and other tonics. The great value of the bromides is recognized, but caution is to be given in regard to their frequent failure, their abuse, and their dangers.

The danger of drifting into a routine treatment is greater, and its results more disastrous, in this disease than in any other.

Dr. James C. Wilson, of Philadelphia, read

a paper on "The Diagnosis of Tumors of the Anterior Mediastinum."

The most frequent tumors are lymphoma, sarcoma, and carcinoma. Carcinoma probably never occurs as a primary disease. Primary sarcoma is also rare. Lymphadenoma is a more frequent form of growth. The diagnosis of tumors of this space cannot, as a rule, be positively made. The principal symptoms are pain of a pleuritic character, superficial, not deep as the pain of aneurism, dyspnœa, dysphagia, constriction, and compression in the sternal region. The pain is apt to be paroxysmal, and this has diagnostic value. Fever is absent unless due to inflammatory complication. Nutrition is often good, emaciation being, as a rule, due to pressure on the œsophagus. On inspection, there is found distention of the veins of the neck, protrusion of the eyeballs, inequality of the pupils, and tumefaction of the face and neck from serous infiltration. Asymmetrical protrusion of the upper part of the chest may also be present. Enlargement of the thyroid gland and of the glands at the root of the neck and in the axillæ often occurs. On percussion, a modification of the area of dullness is found. The auscultatory signs vary greatly in different cases. The heart is usually enfeebled and its rhythm disturbed. The respiratory murmur is diminished, and stridor is less common than in aneurism. Great enfeeblement of the respiratory murmur of one side may be of diagnostic value. The differential diagnosis from aneurism is to be based on the history, the presence of malignant growths elsewhere, existence of dullness on percussion without the characteristic signs of aneurism, the presence of pain of a stitch-like character, the sense of constriction, and the age of the patient. Tumors are distinguished from pericardial effusion by the irregular outline of the dullness, the greater transverse diameter, the dullness is, as a rule, at a higher level than in effusion, and the absence of any of the common causes of pericarditis.

The doctor then went on to consider in detail the differential diagnosis between the different forms of tumor which may occupy the anterior mediastinum.

William H. Welch, of New York, read a paper on "The Pathology of Myocarditis."

The lecturer thought that too little attention was paid to this affection. Diseases of the heart-walls are among the most important to which this organ is liable. Of all the diseases of the cardiac muscle, myocarditis is the most important. He then described the anatomical peculiarities of this disease. It is not really an inflammatory change, but is the result of degeneration, atrophy, and the deposit of fibrous matter due to defective nutrition. This is brought about by partial occlusion of the coronary arteries. This is another condition to which too little attention

is paid. He reported a number of cases in which examination of the heart during life had revealed no positive signs of disease, but where, the patient dying suddenly, there was found, after death, occlusion of the coronary arteries and myocarditis. He classed the cases which he had seen as follows: 1. Cases where no symptoms referable to the heart were noticed during life, death occurring from other causes. 2. Sudden death without known symptoms referable to the heart, and where lesions of the coronary arteries and myocardium were the only assignable cause of death. 3. Sudden death, preceded by one or more attacks of angina pectoris. 4. Cases where some symptoms of cardiac insufficiency had been present for a short time. 5. Cases attended for months with the usual symptoms of disease of the valves of the heart.

"Irregular Apoplectic Attacks from other Causes than Hemorrhage or Embolism" was read by Dr. Gaspar Griswold, of New York City. The term apoplexy here is employed to denote a symptom complex rather than a particular pathological condition of the brain. In addition to extravasation and plugging, there are certain functional disturbances which give rise to unconsciousness, hemiplegia, and convulsions more or less severe or prolonged. The history of four cases was communicated, in which the erroneous diagnosis of cerebral hemorrhage was made, when the transitory character of the symptoms afterwards showed that no organic lesion existed.

A paper on "Occult Causes of Disease," by Dr. W. L. Schenck, of Osage City, Kansas, was read by title and referred.

Third Day.—Dr. Austin Flint, Jr., of New York, read a paper on "The Treatment of Diabetes Mellitus."

He referred to the fact that sugar was occasionally found in the urine of apparently healthy persons. In his experience the proportion had been one in every three hundred and seventy-seven cases. He next called attention to the different methods of testing for sugar, stating that if a perfectly fresh solution of Fehling's test be employed there can be no error in the result. He also commended Squibb's test. The specific gravity bears no relation to the proportion of sugar. Sugar may be present in urine of a low specific gravity. He had seen it in urine of a specific gravity of 1010. The quantity of urine need not be increased. He considered the liver to be a sugar-producing organ. In health this sugar is washed away by the blood as rapidly as it is formed. The sugar contained in the food is normally destroyed in the liver. In regard to prognosis, he said that if the patient would submit to a certain course of treatment as soon as glycosuria was recognized, he thought that it was possible to effect a cure of the disease, or at least to remove the most characteristic symptoms, with the exception,

perhaps, of the occasional appearance of a small quantity of sugar in the urine as a temporary condition. In the treatment almost sole reliance should be placed on the use of a diet from which starches and sugar had been excluded. This should be carried out absolutely. Systematic daily muscular exercise should be enforced, but fatigue should be scrupulously avoided. All alcoholic excesses and the use of sweet fruits are to be avoided. In cases where the sugar persists, the use of solution of arsenite of bromine in doses of three drops three times a day is often of service in diminishing the amount of sugar and relieving the distressing symptoms of the affection. This may be continued for weeks or months without unpleasant effects. The rigid diet should be continued for at least two months, even in the mildest case. The return to ordinary diet should be gradual, and the urine should during this time be examined every five or six days.

The following papers were then read by title: "Phthisis, its Successful Treatment," by J. P. Miller, M.D., of West Virginia; "The Milk Treatment of Disease," by James Tyson, M.D., of Philadelphia.

A paper by Dr. J. E. Atkinson, of Baltimore, entitled "Bright's Disease of Malarial Origin," was read by title.

Dr. Henry F. Formad, of Philadelphia, read a paper on "Tuberculosis." (As Dr. Formad's views have recently been published in our columns, we do not consider it necessary to repeat them here.)

Dr. Austin Flint, Sr., thought that if tuberculosis was an infectious disease, produced by a parasite, its contagiousness would follow as a matter of course. The presence of a parasite had been demonstrated. The great preponderance of evidence is in favor of the view that it is uniformly present in products recognized to be tuberculous. The bacillus is not found in products which from other characters are considered to be not tuberculous. The conclusion which he had reached was that there was some essential connection between the presence of this parasite and the tuberculous disease. In regard to the contagiousness and inoculability of tuberculosis, he thought that all testimony was in favor of this. Other causes may co-operate and undoubtedly do co-operate in the production of tubercle, but the presence of the specific parasite is essential.

Dr. William H. Welch agreed with Dr. Flint. Dr. Formad had spoken of tuberculosis produced by inoculation of other substance than the bacillus. If bacilli be the sole cause, the condition can of course be produced in no other way. Koch, in his experiments, had adopted every precaution to prevent an error. With better methods of investigation, he had found the bacillus in every case. When the difficulties of the process required

for the detection of the bacillus are considered, it is not at all wonderful that at times it should not be discovered. The essential point of Dr. Formad's objection is whether or not tuberculosis can be produced by other causes than the bacillus. The weight of evidence is in favor of the view that tuberculosis can be produced by the inoculation of no other substance than the bacillus tuberculosis.

Dr. George M. Sternberg, U.S.A., had not been able to reach any definite conclusion in this matter. He had performed some experiments, but they had not been conclusive. He thought that the suggestion of Dr. Formad that the bacillus might act as a local irritant was worthy of consideration. He suggested that possibly the reason why tuberculosis had appeared in animals which had been inoculated with other matters than the bacillus might be that the animals had developed the condition from being kept in unsuitable quarters.

Dr. R. S. Fitz, of Massachusetts, thought that the pith of Dr. Formad's remark lay in the statement that he had produced tuberculosis without the bacillus. It may be that what he considered tubercles were not really such.

Dr. James Tyson, of Philadelphia, had hoped that Dr. Formad would have presented some carefully-detailed experiments. When Koch's theory was first advanced, he thought it would share the fate of previous theories of this kind. Instead of that, it had been constantly gaining strength. The only way that the matter can be settled is by a repetition of the experiments to decide whether Koch or whether Formad is right. One point in regard to the contagiousness of tuberculosis and to its infectiousness. Dr. Flint thought that one would follow from the other. Tuberculosis may be infectious and yet not be contagious. Malarial fever is an infectious disease that is due to a specific cause, but it is not contagious,—that is, communicable by contact. It may be proved that tuberculosis is infectious before it is shown that it is contagious.

Dr. Janeway related a number of cases which he thought went to show that tuberculosis was contagious.

Dr. Charles Dennison, of Colorado, exhibited a chart to show the relation of pneumonia and phthisis to climate,—these diseases being very frequent in warm and moist climates, while they were comparatively rare in regions which were dry and cool.

Dr. W. T. Belfield, of Illinois, could not agree with the theory that tuberculosis was due to bacteria. He believed that it was due to internal causes or to conditions in which the patient was placed.

Dr. E. O. Shakespeare, of Philadelphia, after an extended review of the matter, concluded that tuberculosis was often an infectious disease, that often it was due to a specific, pathogenetic, parasitic agent, and that so far it has not been demonstrated that anything be-

sides the tubercle-bacillus can produce the disease, nor has the contrary been positively shown.

Dr. G. C. Smythe, of Indiana, referred to different classes of infectious and contagious diseases, and thought that possibly tuberculosis could be placed under the head of local infectious diseases, as syphilis and leprosy.

Dr. H. C. Ernst, of Massachusetts, agreed with Drs. Welch and Fitz, and then went on to describe the advantages and disadvantages of the different staining processes which had been recommended, and called attention to the fact that in performing these investigations nothing less than an immersion lens with some form of sub-stage illuminating apparatus would give reliable results.

Dr. William Pepper, of Philadelphia, had observed similar cases to those described by Dr. Janeway, but his observations had led him to a directly opposite conclusion. He did not believe in the contagiousness of tuberculosis. In the experiments which Dr. Formad had performed, great care was taken to place the animals under the best hygienic surroundings; some were sent to the country, and all were given plenty of fresh air.

He thought that there were many other ways of explaining the connection of the bacillus and tuberculosis than the assumption that the bacillus held a causal relation to tuberculosis.

Dr. Traill Green, of Easton, Pa., did not believe that tuberculosis was a contagious disease, and referred to the fact that working in grindstone-factories would soon induce tuberculosis in perfectly healthy individuals.

Dr. Formad was pleased that so much discussion had been elicited. He was, however, somewhat disappointed, for he had hoped that more stress would have been laid on facts than on views.

In regard to the surroundings of the animals, they had been all that could be desired. He had visited a large number of the laboratories of Europe, and in all cases the animal-rooms were in the cellar. Those of Koch were in this location. His were located in the fourth story, and the animals were kept clean and allowed exercise.

Dr. Newman exhibited a little apparatus, called the electric dumb-bell, which consisted of a rubber arrangement in the form of a dumb-bell. In one of the enlarged extremities was placed a little battery, while in the other were the helix and interrupting apparatus.

The following papers were read by title and referred to the Publishing Committee:

Paper of H. O. Marcy, M.D., of Massachusetts, on "The Germ Theory of Disease."

"Retardation of the Pulse in Mitral Insufficiency," by A. T. Keyt, M.D., of Ohio.

"Specific Treatment of Croup and Diphtheria," by G. A. Linn, M.D., of Pennsylvania.

"Muscular Hypertrophy of the Stomach," by Alexander Marcy, M.D., of Riverton, New Jersey.

"Etiology of Enteric Fever," by S. K. Crawford, M.D., of Illinois.

"Typhoid Fever," by S. K. Jackson, M.D., of Virginia.

"New Theory and New Instrument of Diagnosis," by L. G. Ayres, M.D., of Pennsylvania.

"The Advantage of the Use of Massage in Rheumatic Gout," by Douglas Graham, M.D., of Boston, Massachusetts.

After extending a vote of thanks to the chairman and the secretary for the efficient manner in which they had filled their positions, the Section adjourned.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

T. A. REAMY, M.D., of Cincinnati, Ohio, Chairman; J. T. JELKS, M.D., of Arkansas, Secretary.

"Desperate Surgery among Women" was the title of a paper by Dr. R. Stanley Sutton, of Pittsburg, Pennsylvania. The writer pointed out the great responsibility which devolves upon those undertaking abdominal surgery, and the need of careful training and skill in those who undertake its performance.

A paper on "Surgical Operations for Cancer of the Uterus" was read by title, the author, Dr. Byford, of Chicago, being absent.

Dr. Joseph Tabor Johnson, of Washington, read a communication on "Trachelorrhaphy," in which he went over the ground of the advantages and disadvantages of the operation, already considered to a great extent in the address of the chairman of the Section.

Second Day.—"The Relations of Ovulation to Menstruation" was the subject of a paper read by Dr. A. Reeves Jackson, of Chicago, Illinois, in which the essential dependence of true menstruation upon ovulation was discussed at length.

"Puerperal Septicæmia" was the title of a paper by Dr. Theophilus Parvin, of Philadelphia, who gave a detailed account of an epidemic during his term of service at the Philadelphia Hospital, and declared his conviction that it was an infectious disease, associated with filth and overcrowding, and urged isolation, hygiene, and chemical antiseptics in the treatment.

"The Management of Protracted Labor" was the subject of an able paper presented by Dr. W. H. Taylor, of Ohio, which was well received.

"The Use of Chloroform in Labor" was advocated in a communication read by Dr. J. Herbert Claiborne, of Virginia.

Third Day.—"The Management and Rectification in Difficult Cases of Occipito-Posterior Presentations" was the title of an elaborate paper by Dr. J. E. Taylor, of New York,

in which the mechanism and correction of this presentation were discussed and illustrated by clinical notes of cases.

Dr. Busey then read a paper on the "Causes and Prevention of Laceration of the Female Sexual Organs," written by the late Prof. S. D. Gross, to be read at this meeting. Delicacy would have suggested that, as the last utterances of the dead teacher, the paper be received in respectful silence, or at least spared from criticism, but the spirit of controversy was abroad, and the communication was discussed as freely as if the great author were still living to defend it.

A statistical paper on "A Thousand Cases of Labor in Private Practice" was read by Dr. W. M. Findley, of Altoona, Pennsylvania.

Dr. William T. Lusk read a paper on "Sudden Death in Labor and Childbed." The possible causes of this occurrence are entrance of air into the uterine veins, thrombosis and embolism, syncope or shock. The use of the vaginal douche may cause entrance of air into the uterine veins, and he has therefore discarded its use in hospital service.

"Malformations of the Female Sexual Organs" was the title of a paper by Dr. Brown, of Baltimore, in which several cases of abnormality were reported. In one case entire absence of uterus and ovaries was discovered; in another, defective development of the uterus; and several cases of ante flexion due to this cause were mentioned.

SECTION ON SURGERY AND ANATOMY.

C. S. PARKES, M.D., of Chicago, Chairman; H. O. WALKER, M.D., of Detroit, Secretary.

"Treatment of Compound Fractures" was considered in a practical paper by Dr. Frederick I. Dennis, of New York, based upon records of one hundred and twenty-eight cases treated in New York hospitals by himself, divided as follows: twenty-three of cranium, seventeen recovering; three of thigh, all recovering; forty-eight of leg, all recovering; ten of arm, all recovering; thirteen of forearm, one died; thirty miscellaneous, all recovering.

The death of Professor Gross was then announced, and the Section adjourned as a mark of respect, after appointing a committee to draft appropriate resolutions to be entered upon the minutes of the Section.

Second Day.—"Railroad Injuries of the Extremities of the Human Body, with Observations on the Site of Amputation and Subsequent Treatment of the Stump," was the subject of a communication by Dr. Theodore R. Varick, of Jersey City, New Jersey. Death by shock after accident was attributed to forcing of the venous blood back on the heart, producing paralysis of the right heart. He advocated hot-water dressing to the stump, free drainage by tubes, irrigation by thymol solution, and oakum outer dressing. Twenty-

one major amputations without a death were reported by the lecturer.

THE DEATH OF PROFESSOR GROSS.

Dr. L. A. Sayre, of New York, then presented the report of the special committee appointed to draw up resolutions in relation to the death of Prof. S. D. Gross, as follows:

"*Resolved*, That the members of the Surgical Section of the American Medical Association have received with a sense of profound regret the intelligence of the death of Prof. Samuel D. Gross, of the State of Pennsylvania, one of the greatest ornaments of this Association, and one of the most distinguished teachers and authors in the medical profession of the United States.

"*Resolved*, That the memory of the deceased deserves to be cherished with love and veneration by the members of the medical profession, as that of a man profoundly versed in medical science, and worthy to be ranked with the greatest and ablest of our age and country.

"He had mastered the vast learning of his profession, and the natural kindness of his great and generous heart was such that throughout his long and successful career as a practitioner he was continually experiencing the most intense satisfaction and pleasure in relieving by his science the sufferings of humanity.

"*Resolved*, That these resolutions be entered upon the journal of the proceedings of this Section, and that the chairman transmit a copy to the family of the deceased.

"J. KELLAR, Chairman.

"AUSTIN FLINT, JR.

"LEWIS A. SAYRE.

"R. A. KINLOCH."

The report was adopted by the Section, and the committee discharged with thanks.

A specimen of supposed spontaneous fracture of vesical calculus, subsequently discharged by the urethra, was, by unanimous consent, exhibited by Dr. J. W. S. Gouley, of New York.

"Amputation at the Hip-Joint" was the subject of a paper by Dr. C. A. Wheaton, of Minnesota, in which special attention was directed to the control of hemorrhage. He did not like the abdominal tourniquet, and said that Davy's lever had been followed by peritonitis.

"An Earthy Calculus in the Substance of the Liver" was reported by Dr. W. A. Byrd, of Quincy, Illinois. The patient was a male, aged about 30 years, who had been ill four months, apparently from malarial fever. Supposing it a simple abscess of the liver, Dr. Byrd opened the painful point over the liver. Probing it one day, he discovered the presence of a hard substance, and extracted a calculus weighing one hundred and fifteen grains. Not knowing positively what the origin of the stone was, he requested sug-

gestions as to its nature and mode of development.

A paper entitled "Branchial Cysts of the Neck" was read by Dr. W. Senn, of Wisconsin. After giving a list of the different forms of cysts of the region named, the reader discussed the etiology of the branchial cysts. He gave the views of the origin of the structures held by the leading pathologists, and stated that he believed they usually only contain the products of degenerated epithelial cells, unlike the mucous and dermoid cysts. The treatment by extirpation is really the only sure method, but is sometimes not possible, and in such instances the thick creamy fluid usually found within is to be drawn off, and an attempt made to set up an adhesive inflammation of the walls by means of the injection of irritating solutions, which often require repeating. He agreed with the German surgeons in not expecting much result from injections.

Third Day.—"The Treatment of Hydrophobia, Historically and Practically Considered," was the subject of a paper by Dr. Charles W. Dulles, of Philadelphia, in which the confused ideas of ancients and moderns were discussed. As the paper exceeded the fixed time, the latter portion was omitted.

The chairman read an abstract of his address on "Gunshot Wounds of the Intestines," based upon experiments upon animals.

The treatment he recommended was to cleanse the intestines or omentum, if extruded, with warm water, and return them to the abdominal cavity as carefully as possible; extract the foreign body, if it can be done, bringing edges of cut peritoneum together and stitching them, and finally using continued suture to close outer wound. If resection of bowel must be performed, every endeavor should be made to save the mesenteric portion. He uses interrupted suture of No. 2 carbolized silk after resection, and explained his manner of introducing the suture, which was Lambert's suture, somewhat different from that commonly employed. He found in all his cases that extravasation of the contents of the bowel occurred. He laid down the rule that if no hemorrhage or sign of injury to the bowel occurs after perforating gunshot wounds, the points of entrance and exit will always heal quickly. He claimed that, in the present condition of operative surgery, many cases of severe gunshot injury of the abdomen may and do recover.

Dr. T. F. Prewitt, of Missouri, read a paper in which he reported a case of "Chronic Serous Synovitis of the Knee, with Enormous Communicating Popliteal Bursa extending to Tendo Achillis." In treatment he recommended aspiration, and the external application of iodine, with compression and the application of some form of fixed apparatus.

Dr. E. H. Bradford, of Massachusetts, exhibited some plaster casts and made remarks

upon his special apparatus for treatment of obstinate cases of club-foot. His plan is to perform tenotomy, and then to stretch the foot with the apparatus daily for ten minutes at a time.

"The Entrance of Air into the Veins a Secondary Cause of Death" was the subject of a paper by Dr. George L. Porter, of Connecticut, who thought this accident was a more common occurrence than had been supposed. He gave a careful description of the symptoms attendant upon the condition.

SECTION ON STATE MEDICINE.

DEERING J. ROBERTS, M.D., of Nashville, Tennessee, Chairman; C. W. FRANZONI, M.D., of Washington, D.C., Secretary.

"Sensationalism and Dogmatism in Sanitary Matters" was the title of a paper read by Dr. Henry Leffmann, of Philadelphia.

He pointed out that much unnecessary public alarm has been created by exaggerated statements about the danger of food-adulteration, articles such as glucose and oleomargarine being considered unwholesome, whereas there is no proof that they are so. Many unfounded assertions have been made in regard to the use of baking-powders, especially those in which alum is employed. The experts in water-analysis have also been too prone to use sensational terms, such as "pollution," "sewage-contamination," etc., when there is no evidence that anything more than the term "organic matter" should be used.

A rather lengthy paper was read by Dr. C. H. Von Klein, of Ohio, on "Jewish Hygiene and Diet, from the Talmud and other Jewish Writings, heretofore untranslated."

The second day's session was devoted to the consideration of the chairman's address, and some resolutions which were afterwards brought before the general session.

SECTION ON OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY.

J. F. CHISOLM, M.D., of Baltimore, Maryland, Chairman; J. L. THOMPSON, M.D., of Indianapolis, Indiana, Secretary.

Dr. P. D. Keyser, of Philadelphia, read a paper on "Neoplasms of the Lachrymal Glands," in which he reported successful results in two cases of extirpation of the gland for sarcoma. In one case a second operation was necessary.

The chairman spoke of several cases of malignant disease coming under his observation, two being of enormous size and giving rise to great deformity. In one case a calcareous degeneration had taken place in the gland after sixteen years' growth.

Dr. Burnett, of Washington, said that he believed that all tumors of this gland begin as adenomata.

Dr. Thompson reported a case of recurrent growth, which was found to be scirrhus.

Dr. Seiler thought from the description that it was a case of intercanalicular fibroma.

Dr. Williams reported some cases illustrating some difficulty in diagnosis in ophthalmology.

Drs. Keyser and Chisolm reported cases where strabismus due to paralysis of recti had been relieved by division and excision of portion of the muscle.

Dr. S. D. Risley, of Philadelphia, read a paper on "Sympathetic Neuro-Retinitis."

In the discussion, cases of sympathetic disturbance were reported cured without enucleation, by iridectomy; and others by atropine, mercurials, and rest in a dark room.

Dr. Burnett believed that some cases escape detection on account of accompanying opacity of the vitreous.

Dr. Carl Seiler, of Philadelphia, read a paper on the "Use of the Cresson Water in the Treatment of Catarrhal Affections of the Mucous Membrane of the Air-Passages."

At the second session, Dr. J. F. Fulton, of St. Paul, Minnesota, read a paper on the "Influence of Climate on the Treatment of Chronic Catarrh of the Middle Ear." In addition to the usual methods of treatment in vogue, the lecturer advocated the benefits to be derived from a judicious selection of appropriate climate as an important hygienic aid in the management of the case. He regarded a high altitude, with rather dry climate, as particularly adapted to the chronic form of the disease not accompanied by decided tendency to suppuration. On the contrary, a low and moist locality is of service in some cases of chronic otitis media purulenta. The climate of Minnesota seems particularly suitable for the treatment of cases that are found to be intractable under ordinary means. Some of these cases recover under the influence of the climate after living there for a time, without any local treatment whatever.

Dr. Seiler said that in hypertrophic catarrh, with which middle-ear disease is commonly associated, a high and dry resort was to be preferred, and the contrary in the atrophic form.

Dr. Turnbull approved of hygienic treatment, and thought that the mountain-climate of Western Pennsylvania had equal advantages as health-resorts.

Dr. D. N. Rankin, of Allegheny, read a paper on "Epistaxis." After reviewing the history of the pathology of the symptom and present knowledge upon its causes, such as hypertrophies, polypi, vicarious menstruation, hæmophilia, etc., he recommended ergot and astringents, and the actual cautery where the bleeding spot could be found. He, in conclusion, related a series of cases illustrating the value of ergot.

Dr. C. W. Brown recalled a case of epistaxis with the hemorrhagic diathesis in which the bleeding was controlled by ergot. He also had found good results from fluid extract of hamamelis.

Dr. W. H. Daly approved of ergot and tincture of nux vomica, and plugging the nose with cotton.

Cases were reported by others in which cold to the nape of the neck, transfusion of blood, and ligature encircling the thigh, had each been useful.

Dr. W. S. Little exhibited and described "A Combined Visual and Astigmatic Test (Snellen Type), based on the Confusion of Letters of the Astigmatic."

The letters in Snellen's type, as in other letter tests, will exhibit the astigmatic defect, by the way the person tested expresses the name for the spherical and right-angled letters in the test of a given size at a given distance: O is called c or G, F is called P, B is called s, the reverse holding. In simple myopia or hypermetropia, no distortion or confusion occurs, but obliteration of the whole letter of a given size at a given distance.

The test is designed on this distortion of letters, and, after a prolonged use, has been lithographed by J. W. Queen & Co., of Philadelphia, Pa., and is now placed in the hands of the profession for the diagnosis especially of astigmatism, since the distortion of the letters confuses words and renders the obtaining of ideas from reading a great annoyance and extra labor.

The letters most frequently distorted, no matter what the axis of the good or bad meridian may be, in astigmatism, have been selected and formed into a word: under this word are placed the letters of the same word as they are distorted, so that the word itself and letters under it appear alike in each line, and one is taken for the other. FOOL has been taken as the word; under it is placed PCCI.

To give an approximate mathematical expression to the degree of the defect, the letters in the word and on line underneath are graded in size from $D=18$ to $D=6$, to be tested at a distance of 6 metres; size of last letter in each line, $D=6$. At this distance if the whole word is confused an astigmatism of 1 D or more exists, but not decided as to form, whether myopic or hypermetropic; the last three letters confused, 0.75 D of astigmatism exists; last two letters, 0.50 D is present; last letter in each line, 0.25 is observed.

The word COCOON uniform in size expresses same principle: size $D=9$, tested at 6 metres, an astigmatism of 0.50 D is present if distorted and confused.

The horizontal lines over FOOL and under PCCI enable the axis of the good or bad meridian to be found.

The word NULLIFIED, graded in size from $D=60$ to $D=4$, is composed of letters distorted by the astigmatics; can be used to test the range of vision: seen from 4 metres in full, $V=\frac{4}{4}=1$; as a letter is lost, $V=\frac{4}{6}, \frac{4}{8}, \frac{4}{12}$, etc.; at 6 metres in letters above $D=18$, astigmatism higher than 1 D will be shown.

The word SUFFICIENT, graded in size from

$D=24$ to $D=1$, for use in small offices, is composed of distortion letters, and is used also to test range of vision at 1 metre: whole word seen, $V=\frac{1}{1}$; as a letter is lost, $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$, etc. An astigmatism higher than 1 D at 6 metres, s will be called B. The management of the test is same as with Snellen's type.

The astigmatic have characteristic mannerisms by which they can be recognized,—pose of the head, narrowing of the palpebral fissure of the eyelid, selection of patterns in material of costume, carpets, wall-paper, cannot use opera-glasses, microscopes, telescopes. No spherical glasses give relief.

In school, college, and seminary life, and later literary pursuits, it is a great annoyance, also in the arts.

If Greek is to be abolished in colleges, the most potent reason is the inability of the students to recognize the characters of the language on account of the prevalence of astigmatism; same holds for Hebrew, German, and musical score.

In the discussion, exception was taken by several to the statement that a diagnosis of astigmatism could be accurately made without the use of a mydriatic. Dr. Little, in closing, said that he was not opposed to the use of mydriatics when necessary.

Dr. Laurence Turnbull read a paper entitled "A Report on the Diseases of the Ear in Locomotive and other Engineers, Firemen, and Conductors, which may endanger the Lives of the Travelling Public."

Dr. Turnbull introduced his subject by giving an account of his experiments on the perception of musical tones by the human ear, conducted in 1875, and ever since that time, showing that he had found a number of persons who were naturally insensible to sounds above a certain pitch, just as there are individuals who cannot distinguish between different colors. He had examined persons of various occupations from the age of fifteen to fifty-seven: in thirty-two individuals, repeatedly examined, the highest musical tone obtained, in a normal healthy ear not specially trained, did not exceed in any instance a fraction over forty thousand vibrations in a second.

In another class of trained ears, chiefly professional men, some rose as high as fifty, fifty-five, and sixty thousand vibrations. Education of the ear to the recognition of musical tones is as necessary as the training of the athlete. He also discovered that *only one* professional man in fifty had two sound ears, the diseased condition arising from various causes, in some instances of hereditary origin, or diseased from infancy, or later the result of cold, exposure to sea or fresh water received into the middle ear by accident or in bathing. As long as there is one hearing ear all goes well, but as soon as that is attacked, then the individual becomes seriously deaf, and should he be a person in charge of the

lives of others, he becomes unfitted for such a responsible position.

The classes to which Dr. Turnbull's attention has been specially called are locomotive engineers and conductors on steam and ordinary passenger-cars running in and out of Philadelphia. Owing to defective hearing, signal-calls, with voice or bell, are not heard, and collisions have taken place, individuals have been injured, and valuable lives lost.

He also entered at considerable length into the chief causes producing these results, giving details from his own experience and observation, and quoting numerous authorities, such as Profs. Moos of Heidelberg and Hartmann of Berlin. He detailed his efforts to bring the subject to the attention of the presidents and superintendents of the various railroad companies of Pennsylvania, and the adoption of a system of careful examinations by the Pennsylvania Railroad Company, with satisfactory results. He also described the qualifications of engineers, and the proper treatment of such men by the Reading Railroad, of Pennsylvania. He gave the objections to the observations of Moos and others by Dr. Pollnow, of Berlin, who, with Dr. D. Schwaback, tested the employés of the Lower Silesian Railroad Company. These two gentlemen discovered thirty-four men who were more or less deaf, and the results of the test by the watch and whispered voice show, as Moos declared, "*that locomotive engineers and firemen, by virtue of their occupation, sooner or later suffer from an affection of the ear, with diminution of hearing, usually on both sides. The influence of occupation is proved by the fact that the number of those who are deaf increases according to the length of service.*"

Yet he concludes that although these facts prove without the shadow of a doubt that "*disturbance of hearing is very prevalent amongst locomotive engineers and firemen, yet these employés* assured him that they had never noticed any great decrease in hearing, while those who had noticed this decrease for a longer or shorter time declared that it did not in the least incapacitate them for active service.

Being of the opinion that the safety of the travelling public requires that both sight and hearing should be perfect, in order that danger and accidents be avoided or reduced to a minimum, he concluded by offering the following resolutions:

"*Resolved, That the American Medical Association recommend to all the railroad presidents and superintendents that they require good hearing on the part of those engineers and conductors on all fast trains in the United States. That the United States government set a public example by examining all their engineers, before taking charge of any steamships of the United States Navy, as to their power of hearing.*"

The paper was freely discussed, but it was not deemed judicious by the Section to pass any resolutions upon the subject.

Dr. Burnett, of Washington, exhibited a micro-photograph of a section of the anterior portion of the globe of the eye, which was a beautiful preparation.

Dr. Hobby, of Iowa, made a preliminary report upon Causes of Blindness, chiefly statistical, obtained from the College for the Blind in the State of Iowa.

Dr. Little, of Philadelphia, referred to consanguinity in the parents as a cause of *retinitis pigmentosa*, and reported a case in which the father and mother were first-cousins.

Dr. Reynolds had kept records of a series of observations of the inmates of asylums. Fifty per cent. of such subjects owe their condition to a purulent ophthalmia during infancy.

Dr. Hobby said that in the case of *retinitis pigmentosa* the parents were related. He did not believe that purulent ophthalmia is as frequent in the West as in the East.

Dr. C. S. Bull read a volunteer paper on the "Artificial Ripening of Cataract." His operation consists in making a large iridectomy, and making pressure subsequently upon the cornea. It was considered applicable only to cases with a dense nucleus. He reported fifty cases, with a large proportion of successful or satisfactory results.

In reply to Dr. Smart, the reporter stated that he had not noticed striation to be caused by pressure on the cornea.

Third Session.—Dr. E. F. Ingalls, of Chicago, read a paper on "Naso-Pharyngeal Fibromata," describing the operation for their removal, and exhibiting an instrument devised by himself for engaging the wire of the snare around the new growth. He gave records of four cases successfully operated upon with either the galvano-caustic loop or the wire snare. He prefers the latter generally.

Dr. J. N. Mackenzie, of Baltimore, read a communication on the Effects of "Chronic Poisoning of the Nose and Adjacent Cavities," in which he described a condition among the workmen in chromic acid not hitherto described. Perforation of the nasal septum was common, and he attributed it to the local corrosive action of the acid; the olfactory region proper is seldom affected, but the Eustachian tube and middle ear were always diseased in the cases he had seen.

In the discussion, the possibility of a syphilitic constitutional state explaining the perforation was also suggested.

Dr. F. H. Bosworth, of New York, reported a very interesting case of "Round-Celled Sarcoma of the Pharynx and Soft Palate," which he had been able to remove, and to cure the patient. He used a modified Jarvis snare. The case and microscopic sections of the tumor were exhibited.

Dr. Roe and Dr. Seiler could not agree

with the lecturer in his remarks denouncing the galvano-cautery, which, if properly used and in appropriate cases, is a valuable method of treating these growths.

Dr. Burnett prefers chemical agents to the actual cautery.

Dr. Uhler, of Maryland, presented some instruments, of crude manufacture but displaying considerable ingenuity, for operations upon the tonsils and naso-pharynx. Their inventor was apparently not acquainted with the resources of modern surgery.

Dr. Ephraim Cutter, of New York, read a paper on the "Physical Causes of Asthma." He considered that the essential element of the affection was the presence of sand in the bronchial secretions, even in the interval of the paroxysms. The disease he regarded as a neurosis due to irritation by this sand, or from various cryptogamic plants, which may be associated in causing the disease.

Dr. E. Carroll Morgan, of District of Columbia, read a paper on "A Variety of Asthma due to Chronic Alcoholism," which he attributed to paralysis of vocal cords of central origin due to chronic alcoholic poisoning.

Dr. O. P. Roe, of Rochester, read a short paper on "Tracheotomy in Young Children," and reported a case where an infant had pushed a piece of egg-shell into its larynx, for which he performed tracheotomy successfully. As the trachea was so small, he was unable to find a tube to fit it, and used instead Martin's method without tubes. Great difficulty was experienced in keeping the wound free from mucus.

SECTION ON DISEASES OF CHILDREN.

WILLIAM LEE, M.D., of Baltimore, Chairman; GEORGE N. ACKER, M.D., of Washington, Secretary.

"The Significance of Bloody Discharges from the Bowels in Young Children" was the subject presented for discussion by Dr. F. Woodbury.

Blood in the alvine excreta of young children is generally considered an alarming symptom, and leads to an urgent appeal for medical aid. The causes are various, and not entirely peculiar to infancy, although generally of more gravity in a child than in the adult, even when the pathological cause is identical.

Bleeding from the bowel is, of course, merely a symptom. *Melæna* is not a synonymous term, because the discharges are not always of a tarry character. When black discharges are due to altered blood, simple dilution with water will bring out the red color of the hæmoglobin: this may be verified by the spectroscope or microscope.

The source of the blood may be gastric or from the upper air-passages, and it may be external,—as where a child nurses from a cracked and bleeding nipple; but the present

consideration is restricted to bleeding from the intestinal canal below the pylorus.

Among the causes may be cited various local conditions of the bowel, which call for careful local examination for their detection. *Venous hemorrhoids, fissure, polypi of the rectum, foreign bodies, traumatism*, various forms of *colitis* (simple and *parasitic*), *worms, intussusception of the bowel*, and *ulcer* were named as possible causes. Congestion of the mucous membrane, either catarrhal or accompanying various visceral disorders (spleen, liver, lungs) or due to portal or umbilical thrombosis, is a very common cause. Some constitutional states may also be assigned as causes. *Hæmophilia* and *purpura hæmorrhagica* are not infrequent causes of bleeding from the bowels in young children. Congenital syphilis has been assigned as a cause, but is only a remote one: it may induce this secondarily through disease of the liver or blood-vessels. Typhoid fever has been assigned as a cause; but, although it occurs sufficiently early in life, it is very rarely attended by hemorrhage in the infant or young child.

Melæna vera, or *melæna neonatorum*, as it has been called, is probably due to congestion of the bowel, and perhaps some associated blood-changes, dependent upon imperfect establishment of respiration. In some cases it is really *purpura hæmorrhagica*.

In conclusion, he reported a case of articular rheumatism in a child eight years of age, accompanied by visceral complication. The symptoms were those of intestinal obstruction accompanied by discharges of blood from the rectum; but no other evidences of intussusception were discovered. The symptoms passed away rapidly under the action of morphia and large warm-water enemata. The patient had an attack of chorea during convalescence.

"Congenital Encephalocele" was the subject presented in a paper by Dr. John H. Duncan, of Kansas City. In the case of a negro infant, seen by him at the age of seven weeks, a tumor was found in the site of the anterior fontanel, which was covered with skin and pulsated. The tumor slowly increased in size, until one day the mother went out, leaving the child with its grandmother; the child cried very much, and the tumor in two days became as large as an orange. The child had nausea. The tumor was ligatured *en masse*, and it was allowed to slough off. The reporter thought that the part removed was principally brain-tissue.

"Diphtheria, based upon an Analysis of One Hundred and Twenty Cases with a Mortality of Seven," was the expressive title of a paper by Dr. J. W. Brown, of New York. It was based upon an epidemic in the country. Of the fatal cases three were killed by the virulence of the disease, and four perished from complications. The affection was looked upon as a constitutional one with a local lesion.

He gave five grains of calomel every three hours until the bowels were freely moved, and gently touched the throat with solution of the persulphate of iron ($\mathfrak{zj}$ to $\mathfrak{zss}$ each of vinegar and glycerin). He also employed a spray containing only one-sixth as much iron, as a local application, freely used. Internally he gave tincture of the chloride of iron, and chlorate of potassium, and quinine. He purified the air by frequently burning sulphur. He did not recommend lime-water or tracheotomy.

Second Day.—The session was opened by continuing the discussion on Dr. Brown's paper of the preceding evening.

Dr. M. P. Hatfield, of Illinois, next read a paper on "Septic Jaundice in Childhood," and reported a case in which jaundice occurred on the third day of an attack of scarlatina, with high temperature; the child recovered. He could find no case similar to this on record.

Third Day.—"The Feeding of School-Children" was the subject of a short communication from Dr. L. W. Atlee, of Philadelphia, in which attention was called to the improper diet of school-children, who are not so much overworked as they are underfed.

"Enlarged Tonsils, and how they should be Treated," by Dr. Dudley S. Reynolds, of Kentucky, was a paper of more than usual interest. He attributed the tonsillar enlargement to obstruction of the lymph-channels, and declared that it had the same significance as enlarged lymphatic glands in the front of the neck,—it is an evidence of perverted nutrition; 8062 persons out of 9012, of which he had preserved records, had enlarged tonsils, and in 8654 of these the patients lived very largely on food containing artificially-produced glucose, which he claimed is poorly assimilated. Starvation will produce lymphatic enlargement. He advocated hygienic treatment, abstaining from glucose and stewed fruits; frequent bathing, milk, fats, animal food, and out-door exercise. He believed cutting the tonsils, except in rare cases, to be unnecessary and injurious.

"Incontinence of Urine in Children" was the title of a paper by Dr. S. S. Adams, of Washington, District of Columbia. He described the varieties of incontinence of urine: 1, constant dribbling; 2, intermittent incontinence; 3, nocturnal incontinence. Phimosi, calculi, ascarides, hip disease, and other causes were cited. Bromides and belladonna are often useful in allaying irritability.

The last paper before the Section was "Practical Suggestions on the Treatment of the Malignant Forms of Scarlet Fever," by Bedford Brown, M.D., of Virginia. He believed that the malignant features, hyperpyrexia, general prostration, and failure of vital powers, could be relieved by energetic eliminative treatment directed to the skin and the kidneys.

SECTION ON ORAL AND DENTAL SURGERY.

F. W. BROPHY, M.D., of Chicago, Chairman; JOHN T. MARSHALL, M.D., of Chicago, Secretary.

"Caries of the Teeth and its Relations to the Germ Theory of Disease" was the title of a suggestive paper by Dr. George V. Black, of Illinois, in which the pathology of dental caries and its dependence upon micrococci were discussed in the light of recent researches into the etiology of zymotic diseases.

"Importance of, and Treatment for, Assuring Healthy Dentine over Endangered Pulps" was a practical essay by Jacob L. Williams, M.D., of Massachusetts.

Second Day.—"Sponge Grafting" was considered by Edward C. Briggs, M.D., of Massachusetts, with reference especially to operations about the mouth. He believed that it might be useful in some cases of cleft palate.

"The Removal of Stains from the Teeth caused by the Administration of Medical Agents, and the Bleaching of Pulpless Teeth," was considered by I. W. Harlan, M.D., of Illinois, who recommended as bleaching agents peroxide of hydrogen, iodine, and ammonia.

Third Day.—"Overdraft of Nervous or Vital Power as affecting General or Special Health," was the subject of a thoughtful essay by Jacob L. Williams, M.D., of Massachusetts, in which an increasingly important factor in diseased conditions was considered.

"Periodic Hemorrhage from the Gums, associated with Pyorrhœa Alveolaris the Result of Amenorrhœa," was the title of a paper by W. W. Allport, M.D., of Illinois, in which cases were cited in which the menstrual nixus was accompanied by bleeding from the gums.

UTILITY OF GELATIN-COATED PILLS.—In a communication to the *Philadelphia Medical and Surgical Reporter*, Dr. M. S. French calls attention to the administration of medicines in pilular form, and especially to the advantages possessed by manufactured pills over those prepared in the ordinary manner. The exact dosage of remedies, the uniform composition of the pills furnished by reliable manufacturers, and the convenience of administration of medicine in a tasteless form were insisted upon as important. As an illustration of the perfect protecting power offered by the gelatin coating, he instanced pills of phosphorus made by Schieffelin, of New York, a year ago, but when cut open the pill mass was found to be just as soft as if made only a few days. Some phosphorus pills kept for eight years were dissolved in water, which demonstrated the unaltered character of the phosphorus by becoming luminous in the dark. After using gelatin-coated pills for seven years in his practice, he states that he has found them perfectly satisfactory, and recommends them to the profession.

ORIGINAL COMMUNICATIONS.

UMBILICAL HEMORRHAGE.

Read before the Philadelphia Clinical Society, March 28, 1884.

BY JOSEPH S. GIBB, M.D.

NEARLY thirty-five years ago (July 2, 1849), Bowditch,* in an article read before the Boston Society for Observation in Medicine and the Collateral Sciences, referred to the absence of the subject of umbilical hemorrhage in most of the standard medical works of the day. He quotes a large number of works on General Medicine, Obstetrics, and the Diseases of Children, in which no mention of the subject is made; also a smaller number where the accident is recorded as a trivial affection, none speaking of it with any degree of seriousness.

Three years later, Dr. Francis Minot,† in an ably-written, elaborate article, speaks in strong terms of this neglect, and attributes it to deficiency of observation, rather than to its rarity.

Again, in 1877, Prof. Hennig,‡ in commenting on this fact, says it is an evidence of the carelessness of medical writers in the past, for it is an accident that surely has occurred in all times.

In spite of this, the omission has not been corrected. Having had occasion recently to refer to the subject, I was surprised to find it completely ignored by the standard works of the day. Cazeaux, Playfair, Leischmann, Ramsbotham, Lusk, and others say absolutely nothing about the subject. Simpson§ devotes half a page to it, and says little as to its etiology, pathology, or therapeutics.

Condie|| relates two cases which occurred in his own practice, and mentions treatment.

The best account found, after a prolonged search, was contained in Bedford's Obstetrics.¶ He speaks of its rarity, probable causes, fatality, and gives several references to the subject.

That umbilical hemorrhage is a rare accident is well attested. The records of maternity hospitals, foundling-asylums, etc., speak for themselves. The Found-

ling-Asylum** of Paris admitted in the two years preceding January, 1853, between nine and ten thousand children, and of this number only one case of umbilical hemorrhage occurred. In six thousand six hundred and fifty-four births in the Dublin†† Lying-in Hospital, no cases were noted as occurring. Dr. H. G. Cox‡‡ reports two cases in two thousand at the Emigrants' Refuge, Ward's Island, New York. The experience of the older members of the profession, who have attended many cases of labor, adds additional testimony to the fact that umbilical hemorrhage is a rare accident.

Jenkins,§§ in 1858, tabulated one hundred and seventy-eight cases of this accident, which are supposed to represent all cases that had been published from 1752 to the date of publication of his article.

Hennig,||| in 1877, speaks of two hundred and thirty cases, which include those of Jenkins. Keiler,¶¶ in 1881, collects two hundred and thirty-six cases, which include all previously collected, with the cases occurring from 1877 to the publication of his own article.

I am able to add five more to this list, making a total of two hundred and forty-one cases of umbilical hemorrhage published since 1752.

The following are the five cases: Dr. Prewitt,*** of St. Louis, reports to the St. Louis Medical Society, in 1881, one case; Dr. W. H. Rousse, Detroit, reports one case in the *Michigan Medical News*, 1881; Dr. Boardman Reed††† reports two cases to the Atlantic County Medical Society, February, 1881. The last is one seen by author, March 2, 1884.

This last case, though lacking in some particulars the regular course of umbilical hemorrhage, will serve as a text. The following is the history:

M. H. was delivered of a healthy female child on the night of February 28, 1884. The labor was rapid and easy. It was followed by a slight post-partum hemorrhage. The mother stated at the time that she always bled easily at the slightest provocation. There was no abnormality observed in child. The

* Bowditch, Am. Jour. Med. Sci., vol. xix., 1850, p. 67.

† Minot, *ibid.*, vol. xxiv., 1852, p. 310.

‡ Hennig, *Handbuch der Kinderkrankheiten—Nabelkrankheiten*.

§ Simpson's Obst. Works, vol. ii. p. 423.

|| Condie, *Dis. of Child.*, Phila., 1847.

¶ Bedford, *Priv. and Pract. Obstet.*, p. 429.

** Jenkins, Report on Spontaneous Umb. Hem., etc., Trans. Am. Med. Assoc., vol. ii., 1858.

†† Jenkins, Trans. Am. Med. Assoc., vol. ii., 1858.

‡‡ *Ibid.*

||| Hennig, *Handbuch der Kinderkrankheiten*, 1877.

¶¶ Edin. Med. Journ., 1880-81, vol. xxvi. pp. 389-393.

*** Prewitt, Umbilical Hemorrhage, St. Louis Cour. Med., 1880.

††† B. Reed, Med. and Surg. Rep., 1881, vol. xlv.

child did admirably, taking the breast with avidity, until 12 o'clock midnight of March 1, or the beginning of third day from birth, when, without evident cause, it began to bleed from navel. When I saw it, half an hour later, the clothing covering it, both front and back, was saturated with blood, as was also the pillow on which it was lying when the bleeding began.

An examination was now made. The cord was found dark and nearly ready to separate. The blood welled up from the umbilical depression and ran in a stream down the abdomen of child. Closer examination failed to reveal any abnormality in neighborhood of umbilicus, or any single point from which the blood emanated. It seemed to simply ooze from umbilical pit.

A ligature was placed around cord as close to abdomen as possible, which seemed to control bleeding; a compress applied; the case was left.

The next morning, at 10 o'clock, the clothing was found saturated with blood, as on previous occasion. The umbilicus filled up with blood as before, still no bleeding point could be isolated. A needle, armed with a double ligature, was now thrust through the base of cord, including some of the tissue around umbilicus, and the cord tied on each side. This again seemed to perfectly control the hemorrhage. A pad was placed over umbilicus, secured by binder, pinned fast. The child was ordered to be placed on pillow, with no covering over umbilicus, save the above-mentioned dressing, so that hemorrhage would be the sooner detected, and, if possible, arrested.

Was again called to see child 4 P.M. of same day (March 2). This time the hemorrhage was much more severe than on either of the previous occasions. The blood showed no inclination to coagulate. It was thin and watery. Previous to this the child had apparently not suffered in general health from these hemorrhages, taking the breast eagerly, kicking about, and manifesting other signs of healthy infant life.

Now, however, she lay perfectly still and motionless on a pillow, in nurse's arms. The face and lips were blanched, extremities cold, pulse feeble, beating 160 and over. Her condition was quite alarming. A solution of the subsulphate of iron was painted over umbilicus, and a pad made of cotton, saturated with this solution, was placed over it, all secured by a tightly-fitting binder.

From this time no further hemorrhage occurred. There were absolutely no other symptoms present in the case, *simply a spontaneous hemorrhage from umbilicus.*

The next day, March 3, the fourth from birth, there was some slight jaundice, not, however, marked; nothing more than we frequently observe in healthy new-born babes. The stools were yellowish; no ecchy-

motie spots, bleeding from gums or other mucous surfaces, were observed, though frequently looked for.

The cord separated entirely the morning of March 4, fifth day from birth, but without any subsequent bleeding.

The hard black mass, consisting of blood and Monsel's solution, dropped out March 6 (seventh day from birth), leaving a clean and perfectly normal-looking umbilicus.

From this date no further symptoms occurred. The child sleeps well, nurses eagerly, bowels are natural in color and consistence, and in every particular is a well and thriving infant.

Though, as before stated, this is not a truly typical case of umbilical hemorrhage, lacking, as it does, some of the minor symptoms, yet it illustrates well the main and important feature of hemorrhage.

Umbilical hemorrhage may be divided into three classes,—viz.:

1. Hemorrhage from improper ligation of cord.
2. Hemorrhage from traumatism.
3. Hemorrhage of spontaneous origin.

The first variety, or hemorrhage from improper ligation of cord, needs but slight comment. It is usually due to carelessness on part of attendant. However, it may occur from a subsequent contraction of gelatinous material, particularly when this is large in amount, after the cord has been properly applied. It is the duty of the medical attendant to examine the ligature a second time after its application, and especially when the jelly of Wharton is in unusual amount.

Hemorrhage from traumatism—the second class—is due to an unnecessary handling of infant. This is most apt to occur before the time of the physiological desiccation of the cord. At this time the coagula in the umbilical vessels are not firm, and hence any undue violence in pulling at cord or shaking infant about may dislodge these coagula and induce hemorrhage. A styptic or ligature at the bleeding point is all that is necessary.

It is the third variety, or spontaneous hemorrhage, which concerns us most particularly, and which will often tax our therapeutic skill to its utmost to control it.

It is rare that we are able to prognosticate, in an individual case, the liability to this accident. Certain symptoms have been laid down by some writers on the subject as premonitory of umbilical hem-

orrhage, but none of them are characteristic, and they may occur in healthy infants or precede other affections. The most constant of the so-called premonitory symptoms is, perhaps, *jaundice*. How common it is to see this symptom in new-born infants who never develop umbilical hemorrhage! Purpura, colicky pains, hemorrhage from other parts, drowsiness, have all been noted as preceding this accident, but, as will be seen, are by no means pathognomonic.

The fact of a hemorrhagic diathesis existing in either parent should make us watchful for the possible occurrence of the same trouble in the offspring. Of all the symptoms given as premonitory, from the nature of the disease, I should regard those of purpura and other hemorrhages as most important. In one hundred and seventy-eight cases collected by Jenkins, symptoms preceded the hemorrhage in thirty-three; in twenty, hemorrhage was the first symptom; in the remainder (one hundred and twenty-five) no premonitory symptoms were noted, the history dating from the appearance of the hemorrhage.

Symptoms and Progress.—Hemorrhage, then, in most cases is the first symptom. (It should undoubtedly be regarded in these cases as a symptom, for it is generally conceded that this form is more than a simple bleeding from the mouths of the umbilical vessels.) It may occur at any time, from a few hours* to eight weeks† after birth. The usual time, however, is about the period of the normal separation of the cord. At first a slight oozing, which is readily controlled by styptics or pressure, it gradually increases in strength and soon becomes quite profuse and uncontrollable. The blood is usually non-coagulable, thin, and watery. It may be arterial, venous, or capillary, though it is a difficult matter to decide its character at the time of bleeding.

Jaundice is a symptom which occurs in quite a large proportion of cases. In Hennig's two hundred and thirty cases it was present in eighty-nine,—forty-six before and thirty-seven accompanying the first bleeding, and always with ecchymosis. It varies in amount from a slight staining of skin to a deep bronze color, being accompanied by clayey stools, dark-

colored urine, and other evidences of deficient hepatic action.

Purpura, ecchymotic spots, bleeding from gums, bowels, or penis, may all be classed under one head,—viz., a hemorrhagic tendency. One or more of these symptoms occur in about the same proportion as that of jaundice.

Etiology.—The causes of umbilical hemorrhage are, in many cases, involved in obscurity. But in a large number there seems to be a direct relationship between the hemorrhage and some constitutional condition of infant, which condition may be either hereditary or congenital.

The hemorrhagic diathesis, or hæmophilia, in my opinion, stands first in the list. Though many persons of this peculiar diathetic condition have perfectly healthy children, still this does not impair the fact that it is a predisposing cause.

But it is not absolutely necessary to invoke the aid of the hemorrhagic diathesis in the parent to establish the existence of this condition in the offspring. Note the symptoms accompanying umbilical hemorrhage: are they not those of some blood dyscrasia? In one hundred and seventy-eight cases there were twenty-six with jaundice, purpura, ecchymoses, bleeding from gums, etc., fifteen without jaundice, but with ecchymotic spots, bleeding from gums, bowels, and penis. In nine cases there was a distinct hereditary transmission of the hemorrhagic diathesis from the parents, and several of these had lost children from other manifestations of this diathesis. In the original case herein reported the mother was a so-called "bleeder." With this evidence before us, it is impossible for us to deny to the hemorrhagic diathesis a first place in the agencies that bring about this accident. And this is not all. See the fatality of this apparently trivial accident. Do we find so large a percentage of deaths in hemorrhage from other causes?

And why is it so large in this? Simply because of the weakness of the walls of the blood-vessels and the non-coagulability of the blood.

Jaundice, as an etiological factor, has been the favorite ground of nearly all writers. It is said, in consequence of deficient hepatic action and choking of biliary ducts, the bile finds its way into the blood, which, by inducing a condition of cholesteræmia, deteriorates that fluid, rendering it less plastic. Unfortunately

* Jenkins.

† Ibid.

for this theory, it has not been supported by the records of the post-mortem examinations that have been made, for in a comparatively small percentage was there any structural change in liver or its ducts found.

In a few cases the infantile blood has been impaired by the syphilitic or scrofulous taint.

Various other conditions have attracted attention as causes, such as excessive use of alkalies by pregnant women for dyspepsia, insufficient food, and the inevitable maternal impressions.

Of all these, interest undoubtedly centres in the two conditions,—viz, hemorrhagic diathesis and jaundice. Now, the question arises, do they both depend on the same state of affairs for their existence? and, if so, what is this condition? Or are they to be regarded as separate and distinct entities, each exerting their baneful influence?

They are found existing together in about the same proportion of cases of umbilical hemorrhage.

Does the circulation of biliary salts in the blood, by its deteriorating influence, induce a state of affairs simulating hæmophilia, or is hæmophilia the disease of our little patient, jaundice merely being an indication that the liver is not receiving its proper healthy pabulum and hence refuses to carry on its function properly?

It will require much more investigation than has been given to the subject in the past to determine these points.

At present we are obliged to admit several etiological factors in the production of umbilical hemorrhage.

Sex.—There appears to be a predisposition on the part of the male sex to the occurrence of umbilical hemorrhage. In one hundred and fifteen cases which I have been able to collect where the sex was mentioned, there were seventy-six, or nearly sixty-seven per cent., males, and thirty-nine, or nearly thirty-four per cent., females.

Morbid Anatomy.—Unfortunately, the morbid anatomy and pathology of umbilical hemorrhage are in a very crude state, and hence very unsatisfactory. The meagreness of autopsies, and absence of details in those that have been made, render it impossible, at present, to arrive at any satisfactory conclusions.

In one hundred and forty-nine deaths

there are records of but twenty-one autopsies, and of these but few complete. Most writers have confined their description to the condition of the umbilical vessels. We have the umbilical arteries and veins pervious in nine cases. The veins were closed in seven; the arteries in four. Ductus arteriosus pervious in one case, closed in three, two of which were incomplete closures. Ductus venosus closed in one, incompletely so in another. Foramen ovale open in four, incompletely closed in one. In one case all vessels were found pervious, and pus and clots adhered to the tunica intima of veins.* In another case all vessels were closed. This one died on fourth day.†

The only conclusions that can be drawn from this record of unusual patency of the foetal vessels is a non-coagulability of blood and weakness of walls of vessels. It certainly does not prove that the disease lies in these foetal structures; rather, on the contrary, that it is in the blood.

The condition of the internal organs has been examined in several cases, but the information obtained has been so lacking in uniformity that, here again, no positive deductions can be drawn. The interest, to all observers, has appeared to centre in the liver as the probable seat of this trouble. In six cases this organ was perfectly normal in size, color, and consistence. Where there was abnormality in organ noticed, it was variously described as deep bronze, very solid, dark-colored, and friable, ecchymotic, and reddish-brown. The cystic and hepatic ducts were pervious twice and impervious in three cases. Gall-bladder empty and largely distended each in two cases.

The surface of internal organs was stained a deep yellow in a number of cases, and also ecchymotic spots well observed in liver, stomach, and colon in several. One observer, noting the condition of blood, describes it as fluid.

Prognosis.—The prognosis of spontaneous hemorrhage from the umbilicus is terribly grave. The mortality has been enormous. Keiler, in two hundred and thirty-six cases, reports but thirty-two per cent. of recoveries; Hennig, in two hundred and thirty cases, eighty-three per cent. of deaths.

* M. Thore, Virg. Med. and Surg. Journal, October, 1853, p. 55.
† Bowditch.

The fatal termination may occur at any period after the commencement of bleeding, from one hour to the eighth week. I have succeeded in collecting ninety-four cases where the time of death has been stated after the first bleeding. Forty-seven, or fifty per cent., occurred within the first forty-eight hours,—twenty-five of these in the first twenty-four, and twenty-two in the second twenty-four hours. The third day there were thirteen deaths; the fourth day, seven; the fifth day, six. After this the seventh and fourteenth days appear to be the favored fatal periods; in the former there were six, in the latter four.

The earliest recorded fatal termination which I have been able to find is one hour* after the first appearance of hemorrhage. In this case the hemorrhage was distinctly stated as arterial, and emanated from left side of cord, at its attachment. The child was exhausted when first visited by physician. The hemorrhage began on the fourth day from birth.

The latest recorded fatal termination was the seventh week† from birth. The hemorrhage began on the eleventh day. It was accompanied by icterus, purpura, etc. It was described as a steady oozing. Styptics, ice, and compresses failed to control bleeding, which was finally accomplished by the ligature *en masse*. However, the child continued to sink, and died at the above-stated time in a purpuric state.

These few examples will illustrate the frightful mortality of this spontaneous bleeding from navel, and the terrible nature of the disease with which we have to contend. It has baffled medical skill in the past, and will continue to do so until the true nature of the affection is accurately known, and our therapeutic resources are used against umbilical hemorrhage, not as an *accident merely* to the newly-born, but as a symptom of a grave and frightful constitutional malady that yearly adds its quota to the death-lists.

Therapeutics.—The therapeutics of spontaneous umbilical hemorrhage has been directed in the past to simply controlling or endeavoring to control the hemorrhage by local measures, in spite of the well-known fact that it was not simply a local trouble with which medical men had to deal. There are some noteworthy excep-

tions to this rule, among whom may be mentioned Dr. Minot,† of Boston, who says, in commenting on this fact, “The internal use of astringents and tonics appears to me to have been too much neglected in the treatment of these cases. . . . We employ such remedies in purpura hæmorrhagica, in scurvy, and other hemorrhagic diseases of adults: why should they be omitted in a disease so similar in its character in infants?”

I would not wish to be understood as advocating an internal treatment for the correcting of a hemorrhagic condition, to the exclusion and neglect of local measures. Such reasoning would, on the face of it, be fallacious and absurd. To my mind, the true theory of the treatment of umbilical hemorrhage is a combination of local measures—styptics, compress, and ligature—with those internal hæmostatics and tonics which experience has proved to be of value in similar hemorrhagic conditions,—ergot, acetate of lead, sulphuric acid, tinct. ferri chlor., and many others of like nature.

Of the local styptics, all have been tried and all have failed: however, they should be resorted to first, for they create less alarm in the mother and are sometimes of value.

The ligature *en masse* is perhaps the most rational method of controlling the bleeding. But it is best not to be too sanguine of the success even of this radical measure of relief; for the blood sometimes wells up from the umbilical depression with no visible bleeding-point, hence it is difficult to determine from whence the bleeding emanates. It may arise from a source deeper than our ligature encloses. This may possibly explain the non-success of this treatment in some cases.

All that can be expected of local measures is a transient cessation of the hemorrhage, so that internal medication may be carried out and the blood improved in its character.

It has been recommended that women who regularly give birth to children who have umbilical hemorrhage should, during their pregnancies, abstain from the use of alkalies, and substitute for them the mineral acids and tonics.

I would remark, in closing, that it is to be hoped that future generations may have

* N. Y. Journ. Med., July, 1855, Stephen Smith.

† Lond. Med. Times, April 3, 1847, Dr. Olliffe.

‡ Amer. Journ. Med. Sci., vol. xxiv. p. 318, 1852.

a more wide-spread knowledge of this neglected, rare, and fatal disease. The only way this can be accomplished is by us, as individuals, making a careful study of each case as we meet it, and then giving to the world the result of our individual experiences. We all stand on a footing in the knowledge of this affection, and hence need not be anxious lest we are making too much of a commonplace affair.

NOTE.—To the elaborate paper of Dr. Conent. Jenkins, read before the American Medical Association in 1858, I am indebted for many valuable references; and particularly would I commend the statistics, which have been of incalculable value to me in the preparation of this paper.

The following additional references may be useful to those wishing to inquire further into the particulars of umbilical hemorrhage:

- London Medical Gazette, vol. xliii. p. 428, Mr. Story.
 Ibid., p. 423, March 9, 1849, Ray.
 Ibid., vol. xlv. p. 755, May, 1850, Manly.
 Boston Medical and Surgical Journal, vol. lviii. p. 22, February 4, 1858, Greene and Page.
 Ibid., vol. liii. p. 109, September 6, 1855, Gould.
 Ibid., vol. xii. p. 440, January 2, 1850, Anderson.
 Ibid., 1849, Bowditch.
 London Medical Times, vol. xxi. p. 449, June, 1850, Amyot.
 Medical Times and Gazette, March, 1854, p. 287, Willing.
 Monthly Journal of the Medical Sciences, July, 1847, Simpson, Edin.
 Ranking's Abstract, No. 6, p. 270, Keiler.
 Western Lancet, September, 1853, p. 552, Gage.
 Gentleman's Magazine, London, April, 1752, p. 172.
 Medical and Chirurgical Transactions, vol. xii. p. 183, London, 1822.
 Northern Journal of Medicine, vol. i. p. 237, Edinburgh, 1844.
 London Medical Times, vol. xvi. p. 116, April 3, 1847.
 New Jersey Medical and Surgical Reporter, vol. i., 1848, Marsh.
 New York Annalist, vol. ii. p. 189, Cock.
 New York Journal of Medicine and the Collateral Sciences, New Series, vol. xv. p. 73, July, 1855, Stephen Smith.
 Virginia Medical Journal, 1855, Otis.
 American Journal of the Medical Sciences, 1850, Bowditch.
 Ibid., 1852, Bailey.
 British and Foreign Medico-Chirurgical Review, vol. ii., 1860, p. 151, vol. ii., 1861, p. 554, Jackson.
 British and Foreign Medico-Chirurgical Review, vol. ii., 1867, pp. 480-485, Sedgwick.
 Medical Times and Gazette, vol. ii., 1855, p. 451, Smith.
 Ranking's Abstract, vol. i., 1867, p. 354, Simpson.
 Edinburgh Medical Journal, 1880-81, vol. xxvi. pp. 389-393, Keiler.
 Underwood, Diseases of Children, vol. ii. p. 89, London, 1789.
 Cheyne, Diseases of Children, Edinburgh, 1801, Essay II., p. 89.
 841 NORTH SIXTH STREET.

ERGOTIN IN VESICAL PARESIS.

A CASE OF PARESIS OF THE BLADDER OF SEVENTEEN YEARS' STANDING ENTIRELY RELIEVED BY TREATMENT WITH ERGOTIN.

BY R. B. HAMM, M.D.

MR. B., a telegraph operator, aged about 35 years, of good family history, etc., came to me suffering from paresis of the bladder, which he stated was of seventeen years' standing. On examination, I found elastic stricture of the membranous portion of the urethra and a subacute cystitis. I also learned that,

through negligence and from the nature of his occupation, he very frequently allowed his bladder to be overdistended for a period of four or five hours.

He had for many years been variously treated by vesical injections and internal remedies, without effect. He was unable to void his urine, even the least portion of it, without the aid of a catheter. Thus the case came to me to be treated.

My first step was to gradually dilate the stricture until I was able to introduce a sound (No. 32, French scale), and by administering internally $\frac{1}{48}$ gr. sulphate of strychnia and $\frac{1}{4}$ gr. ext. of belladonna t. d. About every six hours I instructed him to attempt to urinate, and at least twice daily to completely empty his bladder with the catheter. At the expiration of about three weeks I could find no noticeable improvement in his condition. I then added to my former prescription ergotin 1 gr., and in several days I noticed a very marked improvement. I continued the ergotin treatment, and day by day I found him able to void more urine, until, about two months after I first began using ergotin, he could completely empty his bladder without the aid of the catheter. The subacute inflammation also disappeared after a few days of this treatment.

In a late article, Dr. Grimm advocates the use of ergotin in paresis of the bladder. In my opinion, this case goes to support the theory advanced by him. I think that the remarkable and rapid cure effected in the case I have mentioned was due chiefly and entirely to the use of ergotin. There is no question in my mind but that it is the best remedy for subacute cystitis extant.

GREENSBURG, PA., April 29, 1884.

THE PROXIMATE PROTEID CONSTITUENTS OF THE WHITE OF EGG—A PRELIMINARY NOTE.

BY EDWARD T. REICHERT, M.D.,

Demonstrator of Experimental Therapeutics, University of Pennsylvania.

FOR many years the white of egg, after being freed from its membranous net-work, was considered to be an almost pure egg-albumen; but the comparatively recent researches of Lebonte and Goumoens (*Journ. de Pharm.*, 3 s., xxiv. 17) and Scherer show that this belief is not

true. Lebonte and Goumœns found that the white of egg is a mixture of two albuminous bodies, one being soluble and the other insoluble in glacial acetic acid, while Scherer observed that if a small quantity of acetic acid were added to the white of egg to neutralization, and the mixture diluted with a large amount of water, a flocculent precipitate occurred; that the precipitate was soluble in a small quantity of potassic nitrate or sodic chloride, and that these solutions were coagulable.

Recent researches of my own go a step beyond this, and determine that the body which is insoluble in acetic acid is a *globulin*. I have, moreover, made the very remarkable discovery of the existence of a third albuminous constituent in the white of egg, which possesses the extraordinary property of not being precipitated in weak alkaline solutions by mercuric chloride. This body is no doubt a PEPTONE, since it gives the Xanthoproteic and Millons reactions, and is not precipitated or coagulated by boiling, nor precipitated by strong nitric acid, carbonic acid, sodic chloride, cupric sulphate, or ferric chloride. It is precipitated by tannic acid. There seems to be still another proteid present which is not coagulated by boiling, unless the solution has been previously neutralized, and which is precipitated by strong nitric acid and mercuric chloride. The dialysate of the white of egg gives the Xanthoproteic reaction.

The existence of a peptone in the white of egg is doubly interesting, since this is only the third peptone ever discovered as existing as a natural constituent of a secretion,—the first having been discovered in milk, and the second by Dr. S. Weir Mitchell and myself as existing in the venoms of various snakes.

These results are of such importance that I have felt justified in announcing them in advance of the completion of the study of these bodies.

TRANSLATIONS.

ACUTE NECROSIS OF THE TESTICLE.—A boy, 14 years old, after a chill attributed to a wetting, presented himself with an acute painful swelling of the left testicle to Dr. Maas's clinic at Würzburg. He denied traumatism, and there was no

evidence of associated disease, either gonorrhœa, parotidis, or lung-affection. After treatment by ice, the testicle shrank to the size of a pigeon's egg; it had a hard consistency, and the spermatic cord was thickened. Believing tuberculosis to be present, the testicle was removed. Microscopic examination discovered thromboses in the vessels, especially in the spermatic artery at the location of the body of Highmore. The glandular epithelium and cells of the connective tissue of the testicle were microbiotic. The reporter believes the etiology of necrosis of the testicle to be due to (1) a thrombosis consecutive to injury; (2) thrombosis of the pampiniform plexus, and (3) the subsequent disturbances of the blood-circulation. Castration offers a more rapid relief than any other treatment.—*Breslauer Aertz. Zeitschrift*, 1884, No. 2; *Centralblatt für Chirurgie*.

PULSATING EMPYEMA.—M. Féréol reported a case of pulsating empyema of the left side before the Société Médicale des Hôpitaux. Resection of the ribs was practised, and the patient recovered. The reporter attributes the pulsatile character in such effusions to the presence of a certain amount of gas in the chest, which transmits the cardiac motion, as in the drum of a registering apparatus: pulsating empyema, therefore, is an empyema with pneumothorax.—*Le Progrès Médical*.

IODINE PREPARATIONS AND QUININE.—Rabuteau, in a communication to the Société de Biologie, called attention to the occurrence of disagreeable symptoms in the digestive organs and nervous system from the combined administration of iodide of potassium and sulphate of quinine. He insists that twenty-four hours should elapse between the administration of an iodide and the quinine sulphate. He also warns against the use of quinine during the menstrual period, as it sometimes gives rise to severe symptoms.—*Deutsch. Med. Zeitung*, No. 16.

EPILEPSY TREATED BY ENEMATA.—Dr. Amblard, in two cases of epilepsy, administered bromide of potassium and chloral (3jss of each) in two injections, and found it to stop almost immediately the convulsions. He considers that this method has especial advantages.—*Revue Thérapeutique*; from the *Montpellier Médical*.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 17, 1884.

EDITORIAL.

PROF. SAMUEL D. GROSS.

"ALTHOUGH I may not be able to say, '*Non omnis moriar*,' I trust that I have not lived wholly in vain." So spoke the great surgeon upon the occasion of the complimentary dinner tendered him in 1879, in commemoration of his fifty-first year in the profession. Now that his great career is completed, he might truly say, without any reservation, "*Non omnis moriar*." Born when the nineteenth century was young, he witnessed and shared the wonderful developments of science and civilization that make the age we live in the marvel of all time. Within the limit of the life-history of Dr. Gross has medicine begun to assume a sound scientific foundation, and with his indomitable perseverance, indefatigable toil, and sublime devotion to his ideal he was enabled to contribute more than any other man in this country to the present high standing of medical science. The possession of genius he ever disavowed, and repeatedly claimed that if he had any genius at all it was a genius for hard work, seeming unconscious that the great gift itself is "the power of taking infinite pains." He said on the occasion above referred to that, like Sheridan when he made his maiden speech in the House of Commons, he "felt that it was in him and must come out of him." And how much has come out of him let the future historian of American medicine or of modern surgery endeavor to declare in fitting terms. We cannot. Great heart no less than great mind, his departure is a national affliction, and even the children mourn for him. Nor could he have died at a more fitting time: out-

living by a decade the allotted span of existence, he enjoyed the plenitude of his exceptional powers to the end. At the time that the President of the American Medical Association was in his annual address eulogizing him and speaking words of loving sympathy for him in his weakness, the great soul passed away in peace with God and man.

THE AMERICAN SURGICAL ASSOCIATION.

THE meeting at Washington was very successful, if the aggregate of members in attendance, and the number of communications presented, may serve as a criterion of success. During the three days of the session some thirty essays were read, all requiring labor and much thought in their preparation. It is scarcely necessary to say that in the brief time permitted for discussion it was impossible to do justice to them. This difficulty was foreseen by the founders of the Association, and the Constitution expressly provides that no more than two papers each day shall be read and considered. It is true that the annual volume of Transactions will be much larger than if the Constitution had been strictly complied with, but if the Council or Committee of Arrangements were to provide that all papers presented shall be read in abstract, except the constitutional number, these to be selected by vote of the Association, the time and patience of the members would be less taxed, and the proceedings would not be under such high pressure as they have been. The serious illness of Prof. Gross, founder and ex-President of the Association, was the occasion of general regret, and a resolution of sympathy was telegraphed to the distinguished surgeon in Philadelphia.

The officers elected for the ensuing year are William T. Briggs, M.D., of Nashville, Tennessee, *President*; J. D. Hutchinson, M.D., of Brooklyn, New York, E. H.

Gregory, M.D., of St. Louis, Missouri, *Vice-Presidents*; J. R. Weist, M.D., Richmond, Indiana, *Secretary*; John H. Brinton, M.D., Philadelphia, *Treasurer*; J. Ewing Mears, M.D., Philadelphia, *Recorder*; Henry F. Campbell, M.D., Hunter McGuire, M.D., P. S. Conner, M.D., J. S. Billings, M.D., *Council*. The Association decided to meet again at Washington in 1885, on the last Tuesday in April, to remain in session four days. J. S. Billings, M.D., is Chairman of the Committee. The meeting of the American Medical Association upon the day selected for the next session will probably cause the Council to advance the day selected or to defer it one week, so that the members can attend both meetings.

WHOLESOMENESS OF CANNED FOODS.

THE immense development, of late years, of the canning industry, by which soups, fish, meat, vegetables, puddings, and fruits in great variety are preserved in convenient form, and the consequent universal employment of canned articles of food in camp and ship and home, attract general attention to a discussion of their wholesomeness. Cases have appeared in the public prints of sickness following the use of canned goods and apparently justly attributable to their use. Public interest having thus been excited, chemists and sanitarians have taken it up for investigation, and a number of communications have appeared recently upon the subject. One of the latest utterances, and probably by one whose opinion is most worthy of serious attention, is that of Prof. Attfield, contained in a paper read before the Pharmaceutical Society of London. After repeated examinations, chemists have found that the metallic impurity present, if any exist, must be some compound of tin; but Prof. Attfield declares it to be his opinion that such a solu-

tion of the tin and consequent admixture of a possibly assimilable compound of tin with the food never occurs to an extent which in relation to health has any significance whatever. The occurrence of tin, not as a compound but as the metal itself, is, if possible, still less important. During the last fifteen years he has frequently examined canned goods, and has found tin or other foreign metal, where it exists, to be present only in such small proportions as to be unworthy of serious notice. Before the proportion of tin could attain to a dangerous quantity the food would have such a metallic taste as to be rejected by any sane person.

Where poisoning has occurred it has probably been due to putrefactive or other changes in the food itself, due to a defect in the can, or taking place after the can is opened. The practical lesson is to smell and taste the contents of a can when it is opened, and to reject them if they have a metallic taste or are undergoing putrefaction; and it is also recommended that the whole of the contents should at once be turned out of the can when first opened. With these precautions, canned food can be enjoyed without apprehension as to the consequences.

REORGANIZATION OF THE POLICE FORCE.

DR. M. F. FRENCH, who was appointed Police-Surgeon by Mayor Smith, has been engaged for several weeks in making an examination and report upon the physical condition of the members of the police force, in order to determine the ability of each man to perform his duties. It is the design of Mayor Smith to establish military discipline in the police force, to appoint men on account of personal fitness, to retain them during good behavior, and to pension them after faithful service if injured while in the performance of their duties. It is not

without significance that one poor fellow, fearing that he would not pass the examination and would thus lose his place, committed suicide. We are informed that district police-surgeons will be appointed by the Mayor, who will receive a small salary from the city, and who will attend emergency cases at the several station-houses night or day. In this way the city may finally possess a night medical service, which has been so long needed.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

MR. EDITOR,—When I promised to report to the *Medical Times* what I saw that was novel and striking, in a medical point of view, in London, I had no idea that I should see so much, or that my time should be so occupied that I should be obliged to content myself with merely a brief description of it. In view of the revival, or rather adoption, of antiseptic surgery, which had been already introduced into the leading hospitals in Philadelphia before I left home, perhaps it would interest your readers to hear something of the present status of a sepsis in London. Let me state first that I have seen the service at St. Thomas's, Guy's, St. Bartholomew's, The Royal Samaritan, and The Soho Square Hospital for Women pretty thoroughly, so that the observations I have made are general, and not applicable to any one hospital. Taking Listerism as a system, the first point worthy of notice is about the use of the spray. This is rarely used in general surgery in Philadelphia. In public and private practice it was principally used in cases of abdominal section, though not universally, when I left Philadelphia. Here in London about three-fourths of the hospital operations are done with the spray. In fact, it is used in nearly all cases where the wound is not already in a septic or foul condition. If the wound be septic, as, for example, a suppurative sinus, or something of that nature, communicating with the external atmosphere, the parts are freely mopped with a solution of chloride of zinc (forty grains to the fluidrachm), a strong solution of carbolic acid, or a solution of corrosive sublimate. The utmost care is taken to prevent and check hemorrhage, the practice being to take up each bleeding point with a Billroth or Spencer Wells artery forceps. For small vessels, the pressure of these forceps is generally sufficient to control hemorrhage in a few seconds.

Catgut is going out of fashion, the general feeling being that it is unreliable. Some operators are using silk-worm gut in its place, but the majority prefer pure white asepticized silk. Wire is rarely used for sutures, silk thread being preferred. I should say that more than half use the Lister dressing in all its details, though many men discard it, as, for instance, Mr. Bryant, of Guy's, whose book is so well known in America (a new edition of which, I notice, is to appear shortly). A great many surgeons use dry dressings of Lister's gauze without the protective and moist gauze. Others use cotton or wool, previously asepticized with carbolic or boracic acid or corrosive sublimate. Dry dressings seem to be very much in favor, and I think there can be no doubt that corrosive sublimate will eventually supplant carbolic acid. Some use wet dressings of corrosive sublimate, the average strength of the solution being one part in a thousand. Others use dry dressings with iodoform. All make use of some germicide. English instruments are crude and bulky, and lack the finish and workmanship of American tools. Besides, in comparison they are expensive. Whether or not one believes in the germ theory,—not as to whether germs exist or not, for that is already well proved, but as to whether they play the part attributed to them by Sir Joseph Lister and his earnest followers,—the fact remains the same, that since its adoption surgery has been revolutionized, new domains opened up for it, and operations rendered safe and justifiable and good results obtained from them which were formerly deemed ill advised or necessarily fatal. Among some of these triumphs of surgery which I witnessed in London, all done under the fullest antiseptic precautions, were two removals of the uterus; opening the knee-joint and wiring the patella for fracture of that bone; eight abdominal sections for removal of ovarian or other growths; and a nephrectomy and the incision and external drainage of a perinephritic cyst. Though some of these cases are still under observation, none have died; in fact, all are doing, and have done, well. Mr. Knowsley Thornton, the successor of Sir T. Spencer Wells, told me that since he had succeeded Sir T. Spencer Wells at the Royal Samaritan Free Hospital for Women he had performed seventy-five ovariectomies in two years' time, and that although two were cases of twisted pedicle, and two were complicated with pregnancy,—one woman miscarrying on the fifth day after the operation, and the other one going on to full time and giving birth to a living child six months after the operation,—he had not had a death. He attributes his success to the use of the *spray* and full Lister precautions and dressings. No operator in Philadelphia has had such success as this. Indeed, Dr. Goodell, who has recorded more

cases than any other operator, has had an unfortunate fatality with his cases, as compared to such a brilliant record as this. My own limited experience has led me to prefer solutions of corrosive sublimate to carbolic acid. So far as I know, I first used it in hospital practice in Philadelphia, first as resident under Dr. Gross at the Jefferson, and afterwards under Drs. Morton and Levis at the Pennsylvania Hospital. At both hospitals, with the permission of my chiefs, I used a solution of 1-2000, and obtained excellent results. I was very much criticised and laughed at for doing it. Therefore I am very glad here to be able to record the experience of so eminent a surgical authority as Sir William MacCormac, who, speaking of his own experience at St. Thomas's Hospital, where he used a solution fifty per cent. stronger, says, "The results have been satisfactory, and no poisonous or disadvantageous results have been observed." He now uses as a dressing bags of gauze, prepared with the following solution:

Corrosive sublimate, grains x or parts 10.

Alcohol, f℥ix et f℥ii, or parts 4440.

Glycerin, f℥i et ℥xx, or parts 500.

These bags contain a substance called pine wool, which is really pulverized pine wood, capable of absorbing twelve times its weight of water, and previously steeped in a one-half per cent. solution of corrosive sublimate. This dressing is applied dry. He uses silk sutures, which are prepared by being boiled for one hour in a one-half per cent. solution of corrosive sublimate; sometimes catgut, which is immersed for twenty-four hours in a one-half per cent. solution of corrosive sublimate, and preserved in alcohol. The sponges are kept constantly in a one-half per cent. solution of corrosive sublimate. This form of asepsis was first inaugurated at the Dresden Civil Hospital. As to the use of the drainage-tube, the tendency is to omit it unless there has previously been a great deal of suppuration, or, from the nature of the case, much suppuration is apprehended. In a case of removal of the uterus, by Sir William MacCormac, I saw the patient a week after the operation, when the stitches were removed, and the dressing, which had not been changed since the operation, was not even soiled. Union by first intention had apparently taken place. The temperature had never risen above a hundred, and the patient had never complained of pain. In the hospitals where asepsis is thoroughly carried out, pyæmic complications are almost unknown, and even traumatic fever as the result of operative procedures is rare. Professional opinion is about equally divided as to the use of chloroform or ether. Whichever is given is generally administered by the Clover apparatus. The number of ovariectomies to be seen in London strikes an American as very strange. For example, on

Wednesday, at the Royal Samaritan, I saw Dr. Bantock operate. He used the spray and silk-worm gut for ligatures and sutures. For a dressing he sprinkled the wound with iodoform, and applied a thick layer of cotton prepared with boracic acid. Immediately following him Mr. Knowsley Thornton operated. He used the spray and asepticized silk for ligatures and sutures, controlling a general oozing from the abdominal parietes, to which there were extensive adhesions, by the application of a very strong solution of perchloride of iron. He used the full Lister dressing. On Thursday, at the Soho Square Hospital for Women, I saw Mr. Heywood Smith operate. He used the spray silk for ligatures, and wire sutures, as a dressing dry asepticized lint (boracic acid). Immediately following him Dr. Carter operated. The spray was not used, but had been going in the room for several hours before the operation. He used silk for ligatures and wire for sutures, and the same form of dressing. In a case I saw Mr. Thornton do, I saw a beautiful specimen of varicose veins lying upon the inner wall of the cyst. In a case of this kind it is easy to understand how syncope or even death might result from hemorrhage into the cyst coming from a rupture of a vessel such as this one was. In other branches of uterine surgery the Londoners are far behind their American cousins. All the operators I have seen went about the repair of vesico-vaginal fistula and laceration of the perineum in what would be called at home a very clumsy way. They apparently have not as yet comprehended the fact that a cervix uteri may be torn. They called it hyperplastic enlargement, and, instead of doing Emmet's operation for its repair, they use the hot iron and powerful astringents and caustics. I am afraid I have already trespassed on the space in your valuable journal, and, as I have detailed the most of interest that I have seen, I will bring my letter to a close.

Yours truly,

CHARLES MEIGS WILSON, M.D.

NEW YORK.

AT the adjourned meeting of the Medical Society of the County of New York, April 7, Dr. David Webster, chairman of the Committee on the Collective Investigation of Disease, read a report upon the replies received regarding intestinal obstruction. The following is a brief summary. Fifty-one cases had been reported. In forty-seven of the cases there was total obstruction of the bowels; in twenty-four there was no stercoraecous vomiting, and in one there was only nausea. There was absence of obstinate constipation in three cases. Twenty-one of the patients recovered. In nine cases the

abdomen was opened for the relief of the obstruction, two of which recovered and another might have recovered had it not been for the imprudence of the patient. The age was reported in thirty-one cases; seven were five years of age or under; one between five and ten; one between ten and twenty; eight between twenty and thirty; five between thirty and forty; two between forty and fifty; six between fifty and sixty; one seventy-five years of age. In thirty cases the sex was reported,—twenty-two being males and eight females. In sixteen cases the obstruction was demonstrated by autopsy or operation. Peritoneal adhesions were present in eleven cases; twists of the gut in two; stricture in one; invagination in one; impacted feces in one. On account of the urgency of certain other business, the discussion of the report was postponed until a future meeting.

The Society then adopted resolutions opposing the passage by the Legislature of a bill to incorporate a certain school of midwifery, on account of the objectionable manner in which it was framed. The discussion which took place on this and on a previous occasion when the subject of licensing midwives came up before the Society seemed to indicate that the majority of the profession of the city are opposed to it.

At the Pathological Society (April 23), Dr. Northrup presented the lungs of a child which was taken suddenly with symptoms of dyspnoea and died five hours later of asphyxia. At the autopsy it was found there had been rupture of an enlarged bronchial gland into the eroded trachea and occlusion of the right bronchus. The left lung contained only a few tubercles. Dr. Northrup also presented two lungs in illustration of the common difficulty of distinguishing, by the gross appearances, between simple diffuse broncho-pneumonia and pneumonia with tubercles. Dr. Ferguson presented a specimen of thrombosis of the right vertebral artery which had caused death. He also presented the uterus with a number of large myo-fibromata removed post mortem. Dr. L. A. Sayre presented the vertebral column of a man who had been for years paralyzed from disease of a number of the dorsal vertebræ, was later relieved by wearing a plaster-of-Paris jacket, and finally was cured and acted as orderly in several hospitals. Death finally took place from another affection, and there was found complete solidification of the diseased bones and absorption of three of the vertebræ. The patient had been treated by his son and another gentleman. It was the only instance in which he had had an opportunity to make a post-mortem examination in a case of spinal disease treated by this method. Dr. Carpenter mentioned a case of paralysis of the lower extremities from old spinal disease, in which the patient effected a cure with solidifi-

cation of the vertebræ by self-suspension, having gotten the idea from Dr. Sayre.

Dr. A. Jacobi read a paper at the Obstetrical Section of the New York Academy of Medicine, April 24, entitled "The Medicinal Treatment of Membranous Croup."

Commissioner Raymond has issued an order prohibiting the manufacture and sale in Brooklyn of candy containing fusel oil.

The question of etherization by the rectum is agitating the surgical mind of this city at the present time.

R. C. S.

PROCEEDINGS OF SOCIETIES.

NEW YORK NEUROLOGICAL SOCIETY.

A STATED meeting of the Society was held March 4, 1884, W. J. MORTON, President, in the chair.

Dr. C. L. DANA read a paper upon "Morbid Somnolence," relating a number of histories illustrating different forms of this affection.* These forms are classified as follows:

1. Epileptoid sleeping-states.
2. Hysteroid sleeping-states, including (a) spontaneous or "mesmeric" sleep; (b) trance and lethargic states.
3. Morbid somnolence, the expression of a distinct neurosis (narcolepsy).
4. Unclassified forms.

The speaker's first case (illustrating Class 3) was that of a young man of wealthy family and good personal history, who would go to bed at the ordinary hour and could not be roused till noon or afternoon or evening of the next day. This would continue for a week or two, when the symptoms would remit.

A second case (illustrating Class 2) was that of a young lady who had short attacks of catalepsy, cataleptic *petit-mal*, alternating with sudden attacks of sleep. These came on several times daily. Three other cases (illustrating Class 3) were of neurasthenic persons who for several months had persistent drowsiness, not attributable to any nutritive or organic disorder.

Dr. Dana also reported a case furnished by Dr. L. Putzel, illustrating the epileptoid sleeping-states.

DISCUSSION.

Dr. WILLIAM M. LESZYNSKY said that he knew of two cases which might be termed a mild form of morbid somnolence, where the patient would fall asleep at almost any hour of the day while reading or conversing, the sleep lasting at times for an hour or more.

The cause of this somnolence seemed to be undoubtedly due to faulty assimilation of food, and was cured by nitro-muriatic acid, etc.

* This paper appears in full in the *Journal of Nervous and Mental Disease*.

Dr. WEBER had seen but a few cases. In diabetes morbid somnolence is believed to be a prominent symptom; but he had seen twenty or thirty of such cases, well pronounced, but had not seen one case where morbid somnolence prevailed; on the contrary, the patients did not sleep as much as normal.

He remembered two cases of locomotor ataxia in which there was a great tendency to prolonged sleep; in one of these cases the man would sleep often fifteen hours at a time. He had also observed sopor in chronic endarteritis in a number of cases, especially in cases where the condition of the cerebral arteries tended to apoplexy. There was one man who would fall asleep during dinner, be taken up to bed, and there sleep till the next day.

Drs. ROBERTS and C. E. NELSON made remarks, giving cases as to making up sleep-time after prolonged vigil. Dr. Roberts remarked that sopor was met with in his case of myxœdema, read previously before this Society, and published in this journal: in such cases sopor is recognized as a symptom of disease.

Dr. SHAW (of Brooklyn) related a case of a man who would fall asleep in the clinic.

Dr. R. B. PRESCOTT had had one case bearing on this subject which is not altogether without interest. It was that of a farmer, unmarried, 40 years of age or more, living in a small village in Massachusetts, who, some ten years ago, began, without any apparent cause, to be troubled with excessive drowsiness. It manifested itself first in a disposition to sleep unseasonably long in the morning. He would remain in bed until long after the breakfast-hour, and complain at intervals during the day of still feeling sleepy. Gradually he came to neglect the work of his farm, and remained about the house, dozing away a considerable portion of the time. His social nature, too, underwent a decided change. He became reserved and silent. He shunned all intercourse with friends and acquaintances, was with difficulty made even to answer ordinary questions, and was easily moved to tears. On one occasion he fell asleep on his wagon while taking a load of produce to the nearest market-town, and slept soundly for many hours, his horse having of his own will taken an unfrequented road and finally stopped at the place where he was discovered, the driver still fast asleep.

His condition at present is that of a gradually deepening mental lethargy. He passes a large portion of his time in bed, and takes little interest in what goes on around him, though at times he partially arouses, and will read the newspapers or carry on a brief conversation, mainly in monosyllabic replies to questions. His bodily functions are all normal, and there is no evidence of any physical disease. His general health was good up to

the time of the appearance of this morbid somnolence, and he is not the subject of any hereditary taint, so far as known. He is now regarded by those who know him as mildly insane, and his recovery is not expected.

THE PRESIDENT said: I have seen and treated but one of these very peculiar cases, which I should be willing, following Dr. Dana's lines of diagnosis, to classify as true morbid somnolence. Of course, those who sleep after prolonged forced wakefulness do not fall within the author's categories.

As an instance of simple sleep of this nature, I well remember sleeping twenty-four hours without a moment of recollected consciousness, after two days and two nights in the saddle, during a time of great danger. This may be said to be simply normal somnolence. The case of morbid somnolence I refer to was that of a physician in this city who had suffered from this condition for fifteen years. He was habitually overcome by an uncontrollable desire to sleep during the daytime, no matter how *malapropos* the time or place; this desire he would fight against with all his power of control, but would finally yield to sopor. Even in the dentist's chair, while a sensitive tooth was being "scraped," he had fallen asleep. Often in the rounds of daily practice he would feel this lethargy creeping over him at critical moments, as, for instance, when his services were most needed at a confinement, and would be forced to yield to it and sleep. It was impossible, for the same reason, for him to read or study: in fact, life was becoming to him a soporific blank.

Other symptoms were forgetfulness, frontal and occipital headache, a general malaise, great sense of weariness, palpitation of the heart on active exercise, and prostatic irritation. He had been examined time and time again by friends of eminence in the medical profession for organic disease, and none existed. The urine especially had been the subject of careful tests. I repeated these examinations, with no better results. Malaria was out of the question. I treated this patient on the basis of a profound anæmia, gave him large and increasing doses of iron (Bland's pills) until he was taking thirty grains three times daily, and gave him, additionally, glonoin. Under this treatment he improved wonderfully, and at his last visit, several months ago, he reported that he seldom fell asleep during the day.

Dr. DANA, in closing the discussion, gave a similar case to that of the English farmer: this case would have periods of remission for several years. These cases are supposed to end in insanity. There is persistent drowsiness in diabetes and in syphilis, also previous to attacks of epilepsy. There is recognized a "sleeping sickness" in Africa. The French authority Ballet mentions these conditions.

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✉ CORRESPONDENCE FROM PHYSICIANS PROMPTLY ANSWERED. ✉

TREATMENT OF WRY NECK BY SULPHATE OF ATROPIA.

Dr. W. M. LESZYNSKY related the history of the case of a young woman whose occupation being that of bookfolder, she was obliged to turn her head very frequently towards the left side. The right sterno-cleido-mastoid and trapezius muscles became affected with a very severe form of clonic spasm, which almost exhausted the strength of the patient. The treatment adopted was the daily injection of sulphate of atropia into the contracting muscles, beginning with one-eightieth of a grain, and gradually increasing to one-sixth of a grain, which maximum dose was continued four days, when recovery supervened.

In addition to the atropia, galvanism was used, and the faradic current was applied to the opposite side.

DISCUSSION.

Dr. J. C. SHAW.—I have been called three times in consultation in these cases where atropine was used: there was a great deal of pain, and marked neuropathic tendency; insanity in the family in one case. There is one difficulty in the treatment by atropine, that it sometimes causes disagreeable symptoms, especially in delicate women. In one case, where the drug was pushed it caused such distress that the patient, a woman, refused to take it longer. Atropine in large doses cannot be used in all cases.

Dr. C. L. DANA said that Dr. Leszynsky was entitled to great credit in employing atropia against such physiological odds. He believed that the cure was due to the employment of atropia. One point must be borne in mind, and that is that we must select our cases. In those cases where the disease is plainly neurosis, atropine may answer. In many cases, however, the disease appears to be of a peripheral and rheumatic character. Here anti-rheumatic remedies answer better.

Dr. GIBNEY.—In view of the fact that Dr. Leszynsky administered electricity and other agents, as his report shows, some doubt might be expressed as to the curative effects of the atropine injections. The relationship of cause and effect does not seem sharply enough defined. I have had no personal experience with this drug in torticollis. A few years ago, in a case of rotary spasm of the head, I had very prompt and excellent results in the use of the fluid extract of gelsemium carried to tonic doses. Dr. Leszynsky certainly deserves credit for the heroic dosage of atropine in this case.

Dr. BIRDSALL related the history of a case of torticollis treated at the Manhattan Hospital by his assistant, Dr. Terriberry, in a child about 8 years of age, by the application of as strong a galvanic current as could be endured, for from twenty to thirty minutes, on the affected muscles three times a week for several

weeks, with gradual improvement, which finally terminated in complete recovery. Tincture of belladonna was administered in drop doses, until slight physiological effects were produced. Dr. Birdsall was inclined to credit the curative effect in this case mainly to the galvanism, though he thought that a combination of the method with atropia and that of galvanism would in general be far more serviceable than either alone.

Dr. WEBER.—Was a traumatic effect produced by the hypodermic injections?

Dr. LESZYNSKY.—The injections were made into the substance of the muscle, and no traumatic effect was produced. The preparation of atropia used was Merck's, and the solution was freshly prepared every two or three days.

Dr. DAVID WEBSTER said: I have listened to Dr. Leszynsky's paper with much interest. Although I have seen but few cases of wry neck, I have had a good deal of experience with atropine, and I beg leave to question whether the same results might not have been accomplished by smaller doses applied locally. For the purpose of relaxing the sphincter pupillæ and the ciliary muscle we never give atropia by the mouth or hypodermically, but always apply it locally to the surface of the eyeball. Less than one-twenty-thousandth of a grain applied to the conjunctiva will paralyze the muscles I have named, while it would require a many times larger dose to produce the same effect if given hypodermically.

It is remarkable that Dr. Leszynsky's patient tolerated so large a dose as one-sixth of a grain. There is a wide difference in the quantity required to produce the physiological effects of the drug in different persons. I have frequently seen a drop of a four-grain solution, applied to the eye, produce the peculiar scarlet flushing of the face, especially in infants. I also know of a case in which a single drop in the eye caused marked delirium in a young lady, so that she had to be taken home in a carriage. I have had some personal experience with the physiological effects of atropia. I once swallowed what I supposed to be ten drops of Magendie's solution of morphia to check a diarrhoea while I went to Brooklyn to assist in an enucleation. On the way I noticed that I felt very strangely, going off into curious dreams, entering into imaginary conversations, etc. When I got to the place of operation I found on attempting to talk that I could scarcely speak above a whisper, my mouth and throat were so dry. Dr. Agnew noticed that my face was flushed and my pupils dilated. I went home and went to bed, and slept soundly until the next morning. As soon as I awoke it dawned upon me that I must have taken atropine instead of morphine. As soon as I saw Dr. Agnew he told me he had arrived at the same conclusion. I found the atropine and

morphine bottles side by side on my table. The mystery was explained.

I once saw a case in the practice of a brother practitioner where one-sixtieth of a grain of sulphate of atropia given with half a grain of morphia subcutaneously produced delirium lasting for half a day or more. This was in an hysterical lady who was used to hypodermics of morphia without atropia.

Dr. Leszynsky's method of giving the drug was a perfectly safe one, however, as he cautiously felt his way from smaller to larger doses.

Dr. G. W. JACOBY said: It was not my intention to make any remarks upon this subject, as the objection which I intended to raise to the indiscriminate employment of galvanism and atropine in the treatment of Dr. Leszynsky's case has already been made by some of the preceding speakers; but Dr. Gibney's remarks in reference to the facility of producing the physiological effects of atropine, in some cases, by very minute doses, recall to my mind very vividly a case in which this was also very noticeable. The patient, a girl aged 12 years, came to me affected with a left-sided tonic torticollis, probably of rheumatic origin. My results with electricity upon other cases having been unsatisfactory, I determined to treat this case by the hypodermic injection of sulphate of atropia. I therefore injected one-fiftieth of a grain of the drug.

This one injection produced all the symptoms of atropine-poisoning, ending in a violent delirium, which lasted for ten hours.

When the patient had recovered from the effects of the atropine, I naturally felt reluctant to continue its use, and began treatment of the torticollis by galvanism. After two weeks, the child was discharged from treatment entirely recovered.

The points that I wish to mark are, first, the small amount of atropine necessary in this case to produce delirium; and, secondly, the fact of a cure by self-limitation, or possibly through the action of the galvanic current. Had no ill effects resulted from the use of the atropia, I would probably have continued its use, and, my patient recovering, it would have been only natural to attribute this recovery to the use of the atropine.

Therefore, we cannot be too cautious in drawing conclusions from a single case, no matter how well observed, and we should be very careful not to use two potent remedies such as galvanism and atropine simultaneously, as our scepticism in regard to the efficiency of either one will not be considered scientific proof of the beneficial action of the other.

Dr. LESZYNKY, in closing the discussion, said: As Dr. Dana saw the patient referred to in my paper, I am pleased to hear that he agrees with me in stating that recovery was due to the employment of the atropia.

In reporting the history of this case, I expected that the question would arise as to which of the remedies employed had effected the cure: therefore I was not surprised to hear the criticism of Drs. Gibney and Jacoby, and in reply I will state that the number of cells used in applying the galvanic current was from ten to twenty of a Stohrer portable battery. The patient could not tolerate a stronger application, and this was continued for nearly fifteen minutes daily. After the removal of the electrodes, I found that the spasm invariably became more vigorous than ever, and I always allowed about ten minutes to elapse before injecting the atropia.

I would again direct the attention of the Society to the fact that, notwithstanding the daily application of galvanism in conjunction with the use of atropia, *no improvement was shown until the twentieth day, soon after a rapid increase of the atropia from one-twentieth to nearly one-eighth of a grain.* Then the improvement became so evident that it can hardly be doubted that the atropia was the important element which effected the successful result. In regard to the use of the bromide of sodium, I can safely say that bromism was not produced. The faucial reflex was frequently tested, and remained well marked throughout the entire course of treatment.

Dr. Webster's suggestion may be a very good one, if we accept it from an ophthalmological stand-point, but in this class of cases I cannot see what advantage could be gained by the inunction of the oleate of atropia.

The object in using this sulphate of atropia was to produce paralysis of the trunk and branches of the spinal accessory nerve: therefore it was injected into the substance of the muscle, for the purpose of producing its local effects on the motor nerve, although eminent authorities like Ringer and Fraser have concluded, after an elaborate series of experiments upon living animals, that atropia paralyzes the motor nerves through its action upon the spinal cord, and not by its action through the circulation. I believe that the oleate, if applied locally, would produce more rapid constitutional symptoms, on account of its speedy absorption; and another objection is that the dose cannot be so accurately determined.

In conclusion, I will state that the patient remains well, and that no sign nor symptom of spasm has since been shown.

Nomination of officers for ensuing year:
President, Drs. Birdsall, Gray, Morton,

W. A. Hammond.

First Vice-President, C. L. Dana.

Second Vice-President, G. W. Jacoby.

Recording Secretary, E. C. Wendt.

Corresponding Secretary, W. M. Leszynsky.

Treasurer, E. C. Harwood.

Councillors (five), Weber, Seguin, Jacobi, Morton, W. A. Hammond, McBride.

The Society then adjourned.

GLEANINGS FROM EXCHANGES.

OPERATIVE TREATMENT OF FLAT-FOOT.—Prof. Alex. Ogston explains the condition of flat-foot by the statement that it is due to a disproportion between the strength of the foot and the work it is called upon to perform. The arch of the foot particularly suffers; the bones, tendons, and ligaments, which should maintain the shape of the instep, are so modified that the arch unfolds, its two extremities recede from one another, and, in extreme cases, its curve finally becomes a straight line, touching the ground along its whole length. Examination shows that the inner half of the medio-tarsal, or Chopart's articulation, is specially at fault. Here the relaxation is so great that by acting on this joint alone we can, on the one hand, rectify the faulty position of the foot, and, on the other hand, move it into the worst possible degree of the deformity. It is only when recent, however, that we can, by manipulation, cause the deformity to disappear. Becoming convinced that the principal cause existed in Chopart's joint, Prof. Ogston set to work to produce rigidity, or even bony ankylosis, of the articulation. The plaster bandage was used on several patients, a fixed dressing being kept on for three months, but without permanent benefit. Finally, he performed the following operation, in 1878, upon two patients: An incision was made along the inner border of the foot down to the joint, and a small wedge of bone (three-quarters of an inch deep and of like breadth) was chiselled out of each of the bones. Both cases were dismissed, apparently cured, in two months. In one the cure was permanent; the other was less satisfactory, and the patient was still complaining, nearly two years after the operation.

The operation now recommended (*Bristol Med.-Chir. Journal*, March, 1884) is, after carefully cleansing the overlying skin with carbolic acid, to proceed as before, except that the articular facets of cartilage are shaved off from the adjacent surfaces of the scaphoid and astragalus, in such a way as to permit a restoration of the arch of the foot. The bones are then drilled and pinned together with ivory pegs. An Esmarch bandage is used during the operation, and Lister dressing applied subsequently, and a few turns of plaster bandage are put on outside to steady the foot. The patient must be kept in bed for two or three months. In seventeen cases thus treated, great benefit resulted, and in most of them bony ankylosis and a painless arch were obtained.

URETHRITIS IN MUMPS.—In a case of mumps Schmidt (*Arch. de Méd. Milit.*, 1883, tome i. p. 112) observed on the third day a discharge from the urethra, which lasted

the same time as the swelling of the parotid gland. There was no orchitis, and the patient had not exposed himself to contagion. The discharge was ascribed to a specific inflammation of Cooper's, Mery's, and Littré's glands.—*London Medical Record*.

VOMITING OF PREGNANCY.—Dr. Mial adds sulpho-carbolate of sodium (in doses of gr. v.—viij) to the long list of infallible remedies for the relief of this distressing malady.

NOTES AND QUERIES.

OBITUARY.

SAMUEL D. GROSS, M.D., LL.D., D.C.L.

Professor S. D. Gross died in Philadelphia, on Tuesday, May 6, 1884, at twenty minutes before one o'clock, p.m.

Dr. S. D. Gross was born near Easton, Northampton County, Pa., in July, 1805. His literary and classical education was acquired first at the academy at Wilkesbarre, and subsequently at the high school in Lawrenceville, N.J. He commenced his medical studies under the tuition of Dr. Joseph K. Swift, of Easton, and subsequently became an office pupil of the late Professor George McClellan, for whom he professed great admiration, and to whom he frequently referred in his lectures as a skillful surgeon. In 1826 he came to this city, and, after attending the two years' course at Jefferson Medical College, was graduated from that institution in 1828. He began the practice of his profession in Philadelphia, and occupied his leisure in close study and the translation of several works from the French and German languages. The first fruit of his original investigations was published only two years after his graduation; it was his treatise upon "Anatomy, Physiology, and Diseases of the Bones and Joints," most of the matter of which was subsequently incorporated in his great "System of Surgery." He returned to his native city, Easton, but, after a brief stay, went to Cincinnati to fill the position of Demonstrator of Anatomy in the Medical College of Ohio. After an incumbency of two years in this position, the chair of Pathological Anatomy in the Cincinnati Medical College becoming vacant, Dr. Gross was offered and accepted the position, delivering the first regular course of lectures on "Morbid Anatomy" ever delivered in this country. As the result of painstaking original investigations, he was enabled, in the course of another year, to publish his "Elements of Pathological Anatomy," the first treatise on the subject in the English language.

After four years in Cincinnati, he changed his location to Louisville, Ky., which was to be the scene of his labors for the next sixteen years, occupying the chair of surgery in the university of that city. Being called to fill a similar position, as the successor of the famous Dr. Mott, of New York, in the medical department of the University of the City of New York, he accepted and occupied it for one year, but, finding his surroundings somewhat uncongenial, at the solicitations of his former colleagues of the University of Louisville, he returned to that city.

In 1856 he returned to his native State, being elected to the professorship of surgery in the Jefferson Medical College, a position which he filled for over a quarter of a century. Though still in robust health, in 1882 the weight of his increasing years began to tell upon him, and he felt obliged to resign the very laborious confinement of his duties as an active teacher, and he was appointed emeritus professor, the chair that he had so long occupied being divided between his son, Dr. S. W. Gross, who had been for many years his assistant, and Dr. J. H. Brinton.

Professor Gross was a facile and prolific writer, and his published works show him an earnest, indefatigable, painstaking student. Some of his translations and early works have been referred to, which first brought him into notice; they were followed by others which stamped their author as a man of no common mind. His "Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines" was published in 1843, the "Treatise on the Urinary Organs" in 1851, and the "Treatise on Foreign Bodies in the Air-Passages" in 1854. In 1856 he, with the assistance of some friends, founded the *North-American Medico-Chirurgical Review*, which stopped publication in 1861. In 1857 the "System of Surgery" appeared, which has gone

through six editions. In 1876 "A Century of American Medicine" appeared, to which Dr. Gross contributed the chapter on the "History of American Surgery." Many biographical memoirs, numerous addresses, and a multitude of shorter articles were furnished by Dr. Gross to the medical press, among which may be especially mentioned sketches of the lives of Ambroise Paré, Ephraim McDowell, and of John Hunter and his pupils. He died, as he often had hoped to do, in the harness, and almost pen in hand, having, just before his death, written a paper on "Wounds of the Intestines," which was read by his pupil, Prof. Richardson, of New Orleans, before the American Surgical Association, April 30, and another, which was sent to the American Medical Association, on "Lacerations of the Female Sexual Organs," which was read May 8, by Dr. Busey, of Washington.

The greatness of Prof. Gross could not be confined by geographical limits, and foreign countries added laurels to his wreath. No American had ever been so highly honored: Oxford gave him the degree of D.C.L. in 1872, Cambridge that of LL.D. in 1880, the University of Edinburgh the same degree in 1884. Jefferson College and the University of Pennsylvania were united in conferring the same distinction of Doctor of Laws, one in 1861, the other in 1884. He was a member of many foreign medical societies, English, Scotch, Austrian, and Norwegian, all of which have been proud to honor him among their members.

Among the societies to which he belonged were the Imperial Medical Society of Vienna, the British Medical Association, the Royal Medico-Chirurgical Society of London, the Clinical Society of London, and the Pathological Society of London.

In 1868 the medical profession of this country conferred upon Dr. Gross the highest honor at their disposal, that of President of the American Medical Association. In 1870 he was President of the Pennsylvania State Medical Society, and at the great International Medical Congress, which met in this city in the Centennial year, he was unanimously chosen to fill the President's chair. He founded the Pathological Society of Philadelphia, the Philadelphia Academy of Surgery, the American Surgical Association, and the Alumni Association of the Jefferson College, and assisted in founding, last January, the Medical Jurisprudence Society of Philadelphia, of which he was President at the time of his death.

Prof. Gross was chiefly remarkable during his long life for his unbounded industry. He was a good and bold operator, originating many devices in operative surgery. He was the first to suggest and perform the wiring of the fractured clavicle and acromion process, the suturing of divided nerves and tendons, amputations high up in senile gangrene, an operation for neuralgia in old persons, deep stitches in wounds of the abdomen, and a direct operation in hernia by suturing the pillars of the ring. He was, also, the first to describe prostaticorrhea. He invented numerous instruments, and much preferred those of simple construction. He was one of the first to employ chloroform in surgery, and, although he employed it in thousands of cases, no fatal results were recorded from its use.

BORAX-ERUPTIONS.

DR. EDWARD WIGGLESWORTH, of Boston, requests that any physician who may have observed squamous or other pathological conditions of the skin following the internal administration of borax (whether for epilepsy or not) will send him very brief notes of the cases for publication.

Treatises upon diseases of the skin do not appear to recognize such conditions, yet they have been observed in England by Gowers and other writers upon mental and nervous diseases, as also in Boston in this country. His address is

79 BOYLSTON STREET, BOSTON, MASS.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 27, 1884, TO MAY 10, 1884.

HEGER, ANTHONY, MAJOR AND SURGEON.—From Department of Texas to Department of the East.

HAPPERSETT, J. C. G., MAJOR AND SURGEON.—From Department of Texas to Department of the East.

BENTLEY, EDWIN, MAJOR AND SURGEON.—From Department of the East to Department of Texas.

MIDDLETON, PASSMORE, CAPTAIN AND ASSISTANT-SURGEON.—From Department of Texas to Department of Missouri.

KOERPER, E. A., CAPTAIN AND ASSISTANT-SURGEON.—From Department of the East to Department of Dakota.

DICKSON, J. M., CAPTAIN AND ASSISTANT-SURGEON.—From Department of the East to Department of California.

GIRARD, A. C., CAPTAIN AND ASSISTANT-SURGEON.—From Department of Dakota to Department of Missouri.

GIRARD, J. B., CAPTAIN AND ASSISTANT-SURGEON.—From Department of Arizona to Department of the East.

HALL, J. D., CAPTAIN AND ASSISTANT-SURGEON.—From Department of Dakota to Department of the Columbia.

HALL, WILLIAM A., CAPTAIN AND ASSISTANT-SURGEON.—From Department of Missouri to Department of Texas.

CUNNINGHAM, T. A., CAPTAIN AND ASSISTANT-SURGEON.—From Department of the East to Department of Missouri.

MC CREERY, GEORGE, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Department of Arizona to Department of Dakota.

COCHRAN, J. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Department of Missouri to Department of Arizona.
Paragraph 2, S. O. 101, A. G. O., May 1, 1884.

WEBSTER, WARREN, MAJOR AND SURGEON.—Granted leave of absence for six months, from April 29, 1884, on account of sickness. Paragraph 5, S. O. 103, A. G. O., May 3, 1884.

STERNBERG, GEORGE M., MAJOR AND SURGEON.—Now at Governor's Island, New York Harbor, ordered to repair to this city (Washington, D.C.), to represent the Medical Department of the Army at the annual meeting of the American Medical Association to meet on May 5, 1884, and, on adjournment of the Association, to return to Governor's Island. Paragraph 2, S. O. 103, A. G. O., May 3, 1884.

SHUFELDT, ROBERT W., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from temporary duty in Surgeon-General's office and ordered to report to Lieutenant-Colonel Basil Norris, Surgeon U. S. Army, Attending Surgeon, Washington, D.C., for temporary duty in his office. Paragraph 6, S. O. 100, A. G. O., April 30, 1884.)

BARROWS, C. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Grant, Arizona Territory, and ordered to report for duty at Whipple Barracks, Arizona Territory, relieving First-Lieutenant W. E. Hopkins, Assistant-Surgeon, who, upon being relieved, will report for duty as post-surgeon at Fort Grant, Arizona Territory. Paragraph 1, S. O. 31, Headquarters Department of Arizona, April 21, 1884.

PHILLIPS, JOHN L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON (Fort Warren, Mass.).—Ordered to report for temporary duty to the commanding officer at Fort Preble, Maine. Paragraph 1, S. O. 81, Headquarters Department of the East, April 28, 1884.

CUYLER, JOHN M., COLONEL AND SURGEON (Retired).—Died at Morristown, N.J., April 26, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM APRIL 27 TO MAY 10, 1884.

P. A. Surgeon H. P. HARVEY, detached from Naval Hospital, Chelsea, and ordered to "St. Mary's."

P. A. Surgeon R. H. MCCARTHY, ordered to Naval Hospital, Chelsea.

P. A. Surgeon I. R. WAGGENER, detached from "St. Mary's," and ordered to "Hartford."

Surgeon J. C. WISE, detached from "New Hampshire," and ordered as member of Board of Examiners at Annapolis.

Assistant-Surgeon T. C. CRAIG, promoted to Passed Assistant-Surgeon.

P. A. Surgeon C. W. GRAVATT, detached from Naval Hospital, Chelsea, and ordered to U.S.S. "Michigan."

P. A. Surgeon G. E. H. HARMON, detached from "Michigan," and granted leave of absence.

Assistant-Surgeon J. M. EDGAR, ordered for examination preliminary to promotion.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 31, 1884.

ORIGINAL LECTURES.

THE PRINCIPLES OF MODERN THERAPEUSIS.

Abstract of an Introductory Lecture delivered

BY H. C. WOOD, M.D.,

Professor of Therapeutics in the University of Pennsylvania.

THE practice of medicine among the Chinese is based upon the teachings of experience: their practitioners have seen disease get well after the administration of camel's dung, dried frogs, and the like, and are convinced of the potency of these agents. Our forefathers at one time resembled the Chinese in their methods of practice: scarcely a modern Chinese remedy that does not find its analogue in mediæval European medical annals. The principle of empiricism has served equally in both cases. With the Chinese, however, in some hundreds of years, empiricism has not improved itself, whereas in Western civilization empirical observation has been continually correcting experience: to-day it is discovered that the observation of yesterday was a false one and is to be thrown aside, whilst the morrow, in turn, reveals the false lights of to-day; and so continual progress is made. This progress has largely been aided by the so-called statistical method,—a method, much extended by Louis, in which, instead of single cases being compared with one another, great groups of cases are employed: instead of a pneumonia with a pneumonia, fifty pneumonias are compared with fifty other pneumonias. This method is certainly greatly superior to the use of single cases, but, even in its highest development, is faulty and purely empirical. An able medical writer of mathematical turn has calculated that thirty thousand cases of pneumonia would be required to be collected before exactly a similar case should recur. That clinical empiricism has accomplished much for the good of mankind is, of course, indisputable; but it is equally indisputable that it remains to-day, and will remain to the end, *empiricism*.

Under these circumstances, it is but natural that men should desire some guiding

therapeutic principles which should yield firm scientific foundations for progress, some law of healing which should give consistency and permanence to the treatment of disease.

These things being so, attention is at once challenged by the existence of a large body of medical practitioners who affirm that their practice is based upon a scientific law, which dominates all medical treatment.

Space is here wanting to discuss the various doctrines enunciated by Hahnemann, the founder of the so-called homœopathic school; some of these are completely abandoned by his own followers. The dogma of infinitesimals is too absurd to be combated by serious reasonings. It affirms, not that exceedingly minute, almost infinitesimal particles of certain materials are capable of profoundly affecting the human organism, but that an inert material, like chalk, when minutely divided and subdivided, almost *ad infinitum*, becomes "potentized,"—*i.e.*, endowed with supreme powers which in its larger dose it did not possess. The only shadow of truth contained in this absurd dogma is to be found in the fact that a few substances, like calomel, are absorbed from the alimentary canal only in small quantity at a time, and hence that minute repeated doses have much more effect than a much larger quantity given at once.

The doctrine of infinitesimals is being abandoned by most of the so-called homœopathic practitioners. It is not the important pivotal doctrine of their system of therapeutics. This central doctrine is one which originated with Paracelsus rather than with Hahnemann, and is expressed in the dogma, *Similia similibus curantur*; it is that a symptom is to be cured by the administration of a remedy which in the healthy man will cause such symptoms.

We suppose that few physicians will deny that sometimes a symptom may be relieved by a remedy which is capable of producing such symptom in the normal man. For example, small doses of ipecacuanha are confidently affirmed to cure vomiting, on occasion; and undoubtedly alcohol will relieve the delirium of certain kinds of exhaustion,—a delirium which may be closely simulated in alcoholic intoxication.

A law of nature, however, has no ex-

ceptions, and if exceptions be found to an asserted law, such law is only asserted, not real. Now, there are an infinite number of exceptions to this so-called law of therapeutics. Thus, aconite will often relieve fever, reduce the temperature, and cause sweating; but aconite cannot be made, under any circumstances, to cause anything like fever, to increase the temperature, or to dry the skin. Again, if delirium be not due to exhaustion, but to inflammation of the brain or its membranes, alcohol will increase, not lessen, the cerebral disturbance. In such a case, a remedy like bromide of potassium, which is allopathic to active delirium, and produces cerebral sedation and stupidity in the normal man, might be of service.

Without occupying more space, it is evident that neither a homœopathic nor an allopathic law of therapeutics really exists, and that, if we would scientifically treat disease, we must look deeper and study the conditions of system which underlie symptoms, knowing that very similar symptoms may be produced by antagonistic bodily conditions. If vomiting result from depression of the gastro-intestinal nervous system, we are to treat that depression; if it arise from gastric inflammation, we are to direct our measures against that inflammation. It is not the symptom, but the cause of the symptom, which the scientific physician searches out and endeavors to combat.

The modern physiological school of therapeutics starts with the understanding that there is at present no known law of therapeutics, unless it is that of antagonisms,—by which is meant that it is possible, when a mass of living protoplasm is depressed by some agent, to overcome the depression by a second agent, which is stimulant to the protoplasm; or, in other words, that whilst some agencies increase the molecular movements of the protoplasm, others lessen them, and that it is at least theoretically possible to balance more or less perfectly one of these forces against the other.

The great therapeutic departure of the last decade is the general abandonment of the statistical method of therapeutic research, and the substitution therefor of the so-called physiological method. According to the latter plan, disease is to be first studied in its natural history, so as to determine whether it has a definite course

which cannot be arrested, and, if so, what is the progress of such course; whether the natural tendency of the disease is towards recovery or towards death, and, if the former, why this tendency is sometimes not fulfilled,—*i.e.*, how death is produced in the exceptional cases. If the tendency of a disease is fatal, then the study of the possibility of arresting the disease becomes a problem of great interest.

Having, by studies of the character just glanced at, determined what is possible and useful to be done, the therapist next studies the drugs and remedial agencies at command. By investigations upon man and the lower animals he endeavors to learn exactly how these drugs act upon the human system, first in health and afterwards in disease.

When he has by these two classes of studies learned, in the first place, what he wishes to do, and, in the second place, what he has to work with, he adapts his means to his ends by reasoning not different from that which guides the chemist, the engineer, or any one dealing with difficult force-problems.

So long as disease was looked upon as a sort of evil spirit in possession of the body and it was believed that all disease naturally tended towards death, our knowledge of the natural history of disease grew but slowly. The one great use of homœopathy in the world has been the showing that a large proportion of cases of disease under proper nursing will get well without medical interference, and that the indiscriminate active medication by bleeding, salivation, etc., as practised by our medical forefathers, robbed of life many of the sick who would have otherwise recovered.

Emboldened by the results obtained by the administration of infinitesimal—*i.e.*, inert—doses, doctors have made and are still making accurate studies of the natural history of disease. So that, in perhaps the majority of acute cases, properly-educated physicians now know exactly what they want to do in order to aid nature and to steer the patient successfully past the dangers in the route along which he must travel.

The modern scientific therapist, knowing what he desires to do, studies his instruments. To do this he experiments upon animals, because the modern conscience refuses to allow of human vivisection.

tion. It has been over and over again denied that we can reason from the action of drugs upon animals to their action upon man; but it is not worth while, at present and in this place, to attempt to show in detail the absurdity of such denial. The whole evidence of modern science indicates that, at least in his animal organism, man is not a mysterious creature apart from the rest of creation, but is an animal having structural and chemical relations, within and without, similar to those of other animals.

As an instance and exemplification of these modern therapeutic principles, we may cite chronic valvular heart-disease. By a study of the disease, we have learned that it has no definite course and no tendency to cure; that death is in most cases finally produced by cardiac exhaustion; that life is prolonged by a so-called compensatory hypertrophy of the heart; and that if the increase of the heart-power be proportionate to the increase of the heart-work, a comfortable existence may be in most cases enjoyed almost indefinitely. The clinician thus has learned that it is his function so to guide the patient whose heart is weak and has diseased valves that, if it be possible, compensatory hypertrophy shall be reached. He does this partly by proper attention to hygiene and partly by the use of a drug—digitalis—which, chiefly by experiments upon the lower animals, he knows quiets the excessive movements of a weak, irritated heart by stimulating the inhibitory nerves, and at the same time acts as a powerful tonic to the muscular walls of the heart, and especially aids the nutrition of the viscus by increasing the activity of its circulation.

Summing up into a sentence, it may be said that the general principles which underlie rational therapeutics are to know what can be done and what it is desirable shall be done; then to know the means at command; and, finally, to adapt the means to the end.

At present, the therapist is forced to supplement this principle by a pure empiricism, on account of the imperfection of our knowledge, not so much of the action of therapeutic remedies as of the nature of disease. We have no idea as to the nature of malaria, or of its immediate action upon the human organism; how then can we tell in what way quinine acts as a specific against it,—a fact which we abundantly

know empirically? The best therapeutic practice of to-day is therefore a mixture of science and empiricism; but the science has enormously increased in the last twenty years, and is advancing with arithmetical progression.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF GENERAL PATHOLOGY AND CLINICAL MEDICINE.

BY JAMES C. WILSON, M.D.,

Physician to the Jefferson College Hospital, and to the Philadelphia Hospital.

LOCAL TEMPERATURE IN BILIARY COLIC.

DR. JULES CYR calls attention to the diagnostic value of local thermometry during the attack, in a monograph that has recently appeared (*Traité sur l'Affectation calculeuse*, Paris, 1884). If, during the paroxysm, the thermometer be applied to the area of greatest pain, there is observed a local rise of a quarter, half, or even one degree centigrade above the normal temperature of the region. This local rise may, indeed, reach the level of the axillary temperature, which, under normal circumstances, is a degree and a half higher than that of the epigastrium or the right hypochondrium. This fact was first brought to the notice of the profession by Prof. Peter, at La Charité, in whose service the author had, in March, 1883, the opportunity of observing an interesting case, of which the following particulars are stated. A young woman, confined for two or three years to bed by disease of the spine, was seized during her sojourn in the hospital, and at the end of the second year of decubitus, with a paroxysm of biliary colic, which was speedily followed by others of a like kind, one of which was attended by jaundice. The trace which displayed the axillary temperature, that of the left hypochondrium, and that of the right hypochondrium, during a period of three months, demonstrated—1, a constant parallelism between the elevation of the axillary temperature and the elevation of that of the right hypochondrium; 2, in the periods in which the attacks of biliary colic were absent, the tendency to a uniform temperature in the two hypochondriac regions, sometimes with-

out appreciable difference, sometimes with a variation of a quarter- or a half-degree C.; 3, during the paroxysms, the temperature of the right hypochondrium was higher than that of the left to the extent of 1° to 1.3° C. It sometimes attained, and on one occasion even exceeded, that of the axilla. In a second case, where the focus of pain was in the epigastrium, the temperature at this point, which had been 36.1° , rose to 37.8° and 37.9° , while the axillary temperature varied between 36.6° and 37.5° . In a third case, characterized by violent and frequent, almost quotidian paroxysms, the temperature of the right hypochondrium almost always exceeded that of the axilla of the same side. This element of symptomatology heretofore overlooked, M. Cyr has, on several occasions, studied, with the result of fully confirming the observations of Prof. Peter. He has, further, found the difficulties attending the application of the surface thermometer, under the circumstances, less serious than he was at first led to expect that they would prove. Pain constitutes the essential element of the paroxysm of biliary colic. Other phenomena accompanying it are accessory, and may all be absent in particular cases, for their presence is dependent upon circumstances not at all necessary to the paroxysm. To this general statement, however, it appears that an exception may now be made in favor of the local elevation of temperature. This, in the absence of any cause beyond the paroxysm adequate to explain it, constitutes an important element of diagnosis, especially when we consider that in gastralgia and intercostal neuralgia—maladies in many respects closely resembling the attack of hepatic colic—local elevation of temperature does not occur.

PARALDEHYDE AS A HYPNOTIC.

Further clinical observations tend to define more closely the therapeutic applications of this drug. Less widely useful than chloral, it induces sleep in the same class of cases, and occasionally where chloral in reasonable doses has failed. It is available where chloral is inadmissible, either because not well borne, or—and this is more common—where the development of the chloral habit is to be dreaded.

Paraldehyde, so far as is yet known, excites no especial morbid craving for the repetition or increase of the dose, and

cannot be secretly used, on account of its strong, penetrating, ethereal odor, which pervades the apartment and lingers for many hours upon the breath.

The repugnance excited by this odor, together with inability to retain it on the part of persons of delicate stomach, constitutes the chief difficulty in its administration. This difficulty has disappeared in several cases upon repeated administration. In doses ranging from xxx to xxx , it does not greatly depress the forces of the circulation. I have observed in several instances diminution of the frequency of the pulse, which, however, proved to be of transient duration.

Paraldehyde may, I think, be safely employed in a large class of cases characterized by weak heart, in which chloral is on that account contra-indicated. It is a pure hypnotic, and possesses but feeble anodyne properties. It is therefore indicated in the wakefulness of intense emotional states, such as follow excitement and prolonged watching, or accompany grief, anxiety, and the like; also in the insomnia of aged persons and that of certain forms of mental disease, and in hysteria. I have used it in the wakefulness of acute alcoholism with success where chloral failed. It is less useful, but still of value, in the sleeplessness of acute diseases, as in pneumonia, bronchitis, and enteric fever. In painful inflammatory affections and in neuralgia and rheumatism, where sleep is kept at bay by suffering, paraldehyde is inferior to the preparations of opium.

The price of paraldehyde has, in consequence of increased demand and production, fallen almost forty per cent.

UNRECOGNIZED, OR MASKED, CEREBRAL TUBERCULOSIS.

J. S. Bristowe, in an interesting and suggestive practical paper (*British Medical Journal*, April 26, 1884), calls attention to a group of fatal cases coming under his observation, in which the presence of tubercles in the brain or its membranes was concealed or rendered doubtful during life in consequence of the association therewith of other diseases which seemed adequate to explain the patient's symptoms, or in which the apparent cause of cerebral symptoms might have been taken to exclude the possibility of their dependence on tuberculosis.

These cases numbered in all five. The first two cases were children, who, supposed to be perfectly healthy at the time, received blows on the head which were immediately, or almost immediately, followed by cerebral symptoms leading to death at the end of about three weeks.

Case I.—A boy aged 10 appeared to be in good health up to May 30, when he received at the hands of his schoolmaster two or three blows upon the side of the head.

Shortly afterwards he complained of headache, was sick, and went home. From that time until June 17, he suffered more or less constant pain in the back of the head and neck; he was frequently sick; there was a marked tendency to constipation; and he lost flesh and strength. His pulse was observed to be slow, and his tongue clean. He had no fit. On the 17th he passed into a state of partial coma.

He continued in this condition, with symptoms of basal meningitis, until the afternoon of June 21, when death took place. The post-mortem examination was made on the 22d. The body was emaciated. On removal of the skull-cap, the surface of the brain was found flattened and dry, and the pia mater uniformly and much congested. There was slight inflammatory thickening along the intergyral spaces and large vessels. A good deal of inflammatory deposit occupied the conflues at the base of the brain, and numerous small but distinct tubercles were scattered over the medulla oblongata and pons Varolii, about the circle of Willis, and along the fissures of Sylvius. There was great excess of fluid in the lateral ventricles, with much congestion and thickening of the velum interpositum and choroid plexuses, and abundance of tubercles in the velum. The brain-substance was fairly healthy. There was no evidence of injury to the bones of the skull or to the soft parts within. The lungs, pleuræ, heart, and pericardium were free from tubercles, and healthy. The abdominal organs were not examined.

Case II.—A boy 2½ half years old, previously in good health (except the occurrence of two convulsions at eighteen months, which were attributed to teething), fell downstairs on March 21. He soon recovered from the immediate effects of the fall, and appeared quite well for two days. The third night he was sick. The next day he ran about, but he was feverish and fretful, and still refused his food. He continued in much the same state for the next fortnight, suffering especially from loss of appetite, sickness, and constipation. On the 31st he took to his bed, and from that time till his admission he passed his evacuations involuntarily. On April 7 he had a fit, attended with loss of consciousness, distortion and lividity of face,

and convulsive movements of the hands. He remained unconscious, with Cheyne-Stokes breathing and repeated convulsions, until his death, on April 10.

Necropsy.—The convolutions of the brain were flattened, and the surface dry. There was a little recent lymph in the subarachnoid tissue at the base; and numerous gray tubercles existed about the fissures of Sylvius, crura cerebri, and pons Varolii. The brain-substance generally was healthy, and was free from tubercular deposits. The ventricles were distended with serous fluid, and the white matter around them was softened. There was an encapsuled calcareous mass in the apex of the left lung, and a few miliary tubercles in its neighborhood. Miliary tubercles were also found in the liver and spleen. All the other organs were healthy.

In commenting upon these two cases, Dr. Bristowe calls attention to the following points:

They were, apart from their apparent causes, ordinary cases of tubercular meningitis, and would naturally, by most medical men, have been regarded as such during life. At the same time, they were attended with some obscurity, and there were grounds for entertaining different opinions with regard to them. In both of them, and especially in the first, the symptoms followed so immediately on the blow that it was difficult not to believe that the cerebral mischief was due to the blow; in neither of them was there any clinical evidence whatever of abdominal or thoracic tuberculosis; in neither of them was there any paralysis of the ocular or other cerebral nerve, which is common in inflammations at the base of the brain; and, in the only one examined ophthalmoscopically, the optic disks were healthy; but, on the other hand, there were no signs whatever of disease of the ear, or any evidence of damage to the skull. The post-mortem examination in each case revealed, as was anticipated, the presence of tubercular meningitis, but it showed also that the tubercles were few in number and small in size, and that the tubercular affection was therefore in an early stage. There is no reason to suppose that the tubercular deposit was caused by, or even supervened on, the blow upon the head. Doubtless the natural course of events in each case was, first, the deposition of tubercles, unattended with marked symptoms or obvious deterioration of health; and, secondly, the supervention of inflammation and dropsy excited by the local injury; to which, and

not to the tubercular deposit immediately, the patient's symptoms and death were due. It is probable that in all cases of cerebral tuberculosis the early stage of tubercular deposition is unattended with symptoms, and that it is only at a later period, when the tubercles either have attained considerable bulk, or have implicated specially important parts, or have become associated with inflammatory mischief, that such cases are recognized clinically as cases of cerebral tumor or tubercular meningitis.

The next two cases were instances of disease of the internal ear, in both of which cerebral tuberculosis was discovered after death, but in neither of which was the presence of this complication suspected during life; in the first, because, as a matter of fact, there were no symptoms to justify any such diagnosis; in the second, because—although the child's symptoms were exactly such as might be caused by tubercular meningitis—the history and presence of ear-disease caused them to be attributed to brain-mischief secondary to this affection.

Case III.—A girl, aged $2\frac{1}{2}$ years, had suffered from measles and whooping-cough, and from a discharge from the left ear of a year's duration. Her face suddenly became drawn to the right, without earache or other obvious cause. She had no headache, drowsiness, squinting, or vomiting. She had cough, and occasional coarse crepitation over both lungs. At the end of a month she died of exhaustion, following symptoms of pulmonary tuberculosis, and without other cerebral symptoms than occasional drowsiness.

Necropsy.—The body was much emaciated. The dura mater was firmly adherent to the skull, especially in each temporal region. That over the left temporal bone was a little thickened; and there was a slight amount of inflammatory lymph between it and the bone in this situation. The convolutions were flattened. There was no congestion or inflammation of the pia mater, and no appearance of miliary tubercle. The substance of the brain was soft, and the lateral ventricles contained a large quantity of serous fluid. In the right superior parietal lobule was a caseous tubercular mass as large as a small walnut; this was embedded in the brain-substance, and extended almost to the outer edge of the lateral ventricle. Two similar masses, each of the size of a pea, were found in the left occipital lobe, at its extreme posterior edge. The left temporal bone, at the junction of the squamous and petrous portions, was superficially carious, granular, and presented pin-hole perforations. The external surface of the temporal bone, adjacent to the attachment of

the pinna, was in a similar condition. The external meatus was completely bare and carious. The aquæductus Fallopii was involved in the carious and necrosed bone, and the facial nerve was destroyed. There were no traces of the auditory ossicles. The carotid canal and jugular fossa were not affected. The lungs were adherent by old adhesions, and thickly studded with caseous masses. In the apices were many small cavities. The bronchial glands were enlarged and caseous. The mesenteric glands were caseous. The remaining organs were generally healthy.

Case IV.—A girl, aged 9, was admitted with the history of a fall at the age of two and a half, which resulted in serious injury to the spine and permanent angular deformity in the lumbar region. Three years before admission she had scarlet fever, since which time she had been deaf and had had a discharge from her right ear. Two weeks before admission an abscess broke in this ear, and there was an offensive discharge from it up to the 6th of April. The patient was frequently sick from the commencement of her illness up to the same date, but she continued to run about and play as usual. On the evening of the 7th she had an epileptiform fit, and on the 9th she became so ill that she was brought to the hospital. She suffered from severe headache; both external recti acted imperfectly, as also did the right superior rectus and levator palpebræ. Both pupils were dilated, but the right was the larger. The *tache cérébrale* was well marked. The hydrocephalic cry was frequent. The tongue was coated; there was no sickness; the bowels were confined. The urine was retained, and had to be drawn off by the catheter. There was no affection of the chest. On examination of the right ear, perforation of the membrana tympani was discovered, but no discharge. It was assumed, however, that the child was suffering from cerebral complication of ear-disease, and six leeches were applied to the mastoid process. The temperature to-day varied from 102.2° in the morning to 100° in the evening.

April 11.—The child gradually became comatose, with stertorous breathing, very feeble pulse, coldness of limbs, and falling temperature. When death occurred, in the course of the morning, the temperature was a little below the normal.

Post-Mortem Examination.—The dura mater and skull were healthy. The surface of the brain was flattened and somewhat dry, and the pia mater was a little congested. The membranes covering the medulla oblongata, pons Varolii, crura cerebri, and parts between these and the lamina cinerea were thickened, rough, and studded with a small number of minute gray tubercles. The surfaces of the fissures of Sylvius were adherent, and also presented a few small tubercles. The presence of these bodies was confirmed

by microscopic examination. There was very little fluid in the ventricles, which were not at all distended. The substance of the brain was wet, but otherwise healthy. The fornix was somewhat softened. The vessels at the base were healthy. The sinuses were all healthy. The affection of the ear had not extended to the surface of the petrous bone, and there was no disease whatever in the dura mater covering it. The only other morbid conditions discovered were some caries of the lumbar vertebræ and a double psoas abscess.

The fifth of this series of cases, too long to quote here, was that of a girl, aged 7, suffering from caries of dorsal vertebræ, who was admitted to hospital on the 17th of March on account of abscess in the left temporal region, with protrusion of the eyeball, consequent upon caries of the sphenoid bone. Death occurred August 1.

Post-Mortem Examination.—The body was much emaciated. The left eyeball projected. There was ecchymosis of the corresponding upper eyelid. The left temporo-sphenoidal lobe of the brain was firmly adherent to the greater wing of the sphenoid bone and to the posterior border of the lesser wing. The arachnoid at the base of the brain was a good deal thickened, and of an opaque-yellow color. Surrounding the vessels of the base, and especially along the fissures of Sylvius and connected with the duplicatures of pia mater in the adjoining sulci, were numerous minute gray tubercles. There was great increase of subarachnoid fluid, but in all other respects the membranes were healthy. The ventricles were slightly distended with fluid. The substance of the left temporo-sphenoidal lobe was considerably softened, and was readily broken up by a stream of water. But there was no abscess; and the brain-substance, with this exception, was healthy. The nerves at the base were apparently healthy. In the left orbit, the upper and outer osseous boundary (including the orbital plate of the frontal, the greater wing of the sphenoid, and the orbital portion of the malar bone) was partly stripped of periosteum, carious, and bathed in a considerable accumulation of thick matter. There was also a collection of cheesy pus under the left temporal muscle, connected with denudation and caries of the portion of the sphenoid here situated.

In this case, caries of the vertebræ and of certain of the bones of the skull was discovered post mortem, as had been expected. There was also some inflammation of the portion of the brain in relation with the carious bone; but, further, there were miliary tubercles (scarcely tubercular meningitis) in the usual situation at the base of the brain.

Their presence had not been suspected, and probably had had no influence on the patient's symptoms, or on the event of the case.

These cases appear to the author of the paper to illustrate the fact that there is a period in the early progress of cerebral tuberculosis in which the presence of cerebral mischief is not revealed by symptoms; and that the symptoms which attend the presence of meningeal tubercles are, for the most part, due less to the tubercles themselves than to the inflammation which sooner or later accompanies them. They suggest the very important question whether or not the progress of cerebral tuberculosis, like that of pulmonary tuberculosis, admits of being arrested; and whether the cure of tubercular meningitis—that is, of tubercle with its inflammatory complication—is within the range of practical therapeutics. The difficulties in the way of the solution of this question are very great, at present insurmountable. Dr. Bristowe lays serious stress upon the facts that tubercular tumors are, judging from their clinical history, often very chronic in their progress, extending, it may be, over several years; and that occasionally the membranes of the brain seem, judging from post-mortem examination, to be the only part of the body affected with tubercle. Both of these facts may be regarded as comprising an element of hope as to the latter half of the question.

Patients are not unfrequently met with in whom the history and symptoms render it almost certain that they suffer from tubercular meningitis, but in whom recovery ultimately occurs. That such patients recover from meningitis of the base is certain; but whether from meningitis the consequence or the accompaniment of tubercle, there is no opportunity of placing beyond doubt.

He concludes his valuable paper with the remark that, "at any rate, the belief that we may, even though very rarely, check the progress of cerebral tubercle, and cure the inflammation of tubercular meningitis, is calculated to encourage us in our dealings with such cases, and to justify us in persisting in reasonable treatment, and in hoping against hope."

SALICYLATE OF SODIUM, when administered in large and repeated doses, has been followed by metro-neuralgia.

ACID CALCIUM LACTATE.

BY J. E. GARRETSON, M.D.

THE practical adaptation to daily life of scientific knowledge is a good application so far as the use and comfort of men are concerned. The cheapening of things as to production seems also to be a good to people at large, and not of true detriment to anybody in particular.

Acids, which are used widely in the arts, and which more and more show themselves as instruments of great service in medical practice, are just now receiving at the hands of chemists an attention of not less practical than of scientific import.

The object of the present communication is to direct notice and to afford credit to improvements made by Mr. Charles E. Avery in procuring and cheapening the acid lactate of lime, as explained in a paper read by him before the Boston Society of Arts at a late meeting. That Mr. Avery's work be properly understood, an excerpt is presented from his paper.

"The acids employed in the arts," he says, "have been greatly cheapened and improved by chemical study. As a notable instance, allow me to call to your notice oxalic acid, at first procured from plants, afterward more cheaply by the reaction of nitric acid upon sugar, and finally with great cheapness by treating sawdust with caustic alkalies at a baking heat.

"Apart from the chemical uses of the acids, as in dyeing, bleaching, metallurgy, etc., there is another set of uses, as in food and drink. In this field the industrial improvements have not been of so striking a nature, and, as a result, the food acids, citric acids (citric and tartaric), remain high in price.

"Seeing that this field remained unoccupied, I was early attracted to it, and in 1873 noted down as a chance idea the substitution of acid lactates for acid tartrate of potash, which is the old familiar cream of tartar."

After a consideration of the theory of lactic-acid fermentation, and the discovery by Pasteur of an organized ferment as its cause, he discusses several methods which have been proposed for manufacturing lactic acid commercially, and gives his own process, as follows:

"The process I adopt resolves itself into three portions: 1, manufacture of solution for fermentation; 2, the fermentation;

3, the purification; and, lastly, there is the use of the product itself as a separate consideration.

"I mix 80 to 160 pounds of oil of vitriol with 2000 pounds of cold water, and stir in 2000 pounds of ground maize; this corn-meal may be from inferior corn, from corn more or less heated, soured, or otherwise changed. The average price of corn of good quality here is about one cent per pound, and much less in the West. Inferior qualities are of less cost. The vitriol can be bought at 1½ cents per pound by single carboy, and would cost much less if chamber acid were used and made on the spot.

"I let the meal-mixture stand overnight, and next morning add, in portions, 2000 pounds of boiling water. After boiling until the tests are satisfactory, I run the hot mixture into the fermentation-tank, and neutralize with 1000 pounds carbonate of lime, stirring well. The carbonate of lime is, of course, in large excess. I then add 4000 pounds cold water and a variable amount of lactic ferment; one or two per cent. seems to answer well, although a larger quantity induces fermentation more speedily, saving perhaps half a day, but less will suffice.

"In a day's time the most vigorous action ensues, the carbonic acid released from the carbonate of lime escaping in large bubbles, giving the impression that the liquor is boiling. In three or four days' time, with good lactic yeast, the mass sets into crystals of lactate of lime, resembling thick mortar. I then dissolve the lactate in hot water, filter it, crystallize, press and purify, much as in other processes, with two contractions, however. I use animal charcoal to remove odor and color, and, after acidulation, distil off the butyric acid that has been formed. By more vigorous precautions in the fermentation, I expect soon to be rid altogether of the butyric ferment.

"From experimental results already obtained on the small scale, I have reason to believe that I can reduce the waste and cost of purification, especially in the direction of animal charcoal, and experiments will speedily be resumed in this direction. I am much assisted in this search by the comparatively clean, pure crude material with which I start, unlike the foul mass obtained by other processes of practical value. . . .

"As to the value of lactic acid and acid lactates in raising bread, as substitutes for cream of tartar, there can be no question, for sour milk always has raised bread, and made good bread, and cream of tartar is a recent substitute for lactic acid, rather than lactic acid a substitute for it. At present prices of milk, the cost is greatly reduced. The corn is not fed to the cow partly to be wasted in maintaining heat and life and partly to be returned as fat and decomposed sugar, but, by a simple change, turns almost completely to lactic acid. In one respect, however, I think an advantage may be fairly claimed for the acid lactate of lime over cream of tartar,—namely, it will be hard for any cook, no matter how careless, to make either sour bread or alkaline bread; and every cook has such failures with cream of tartar. In cream of tartar, or acid tartrate of potash, the acid molecule reacts on the saleratus to free the gas; unless the exact proportions be hit and the mixture be complete, the bread is alkaline wholly or in spots if the saleratus be in excess, and sour if the acid tartrate be in excess. In the acid lactate of lime, in like manner, the acid molecule reacts to free gas from the saleratus. The neutral lactate of lime left by the reaction again acts on the saleratus, forming lactate of soda, carbonate of lime, and free carbonic acid. Hence we have a wide range of proportions in which the bread can be neither acid nor alkaline.

"This carbonate of lime is itself a guard against acetous fermentation or souring of the bread, and can hardly be objected to, as Liebig has recommended lime-water to be used in bread-making, partly to add the lime-salts taken out by bolting, partly because it improves the quality of the bread and its appearance."

He then exhibited a specimen, which showed that the acid lactate is a permanent salt, not readily changed to butyrate, not deliquescent, and not too gum-like to resist powdering.

In conclusion, he stated that he had rid himself "fully of the notion that starch, dextrine, and other carbo-hydrates undergo directly a true lactic fermentation.

"In Miller and other works of good standing it is stated that raw corn-meal under like conditions had but partly changed into lactic acid in forty days. Technically speaking, corn-meal cannot furnish lactic acid unless the starch be first transformed.

Nor will it then give lactic acid in quantity unless the albuminoid matter be either added or left in the presence of the nitrogenous phosphatic salts of the neutralizer of the ferment; but even this is not a fulfilment of all the conditions for large and varied yield; we must have albuminoid matter present. It has been fully shown that it is not essential that this albuminoid should be rank or putrid, but that better and quicker results were obtained with fresh vegetable albuminoids than with stale animal albuminoids. I have improved the purification by the introduction of animal charcoal and distillation, and have made the operations inoffensive. With regard to cheapness, little needs to be said. With a yield of lactic acid equalling fifty per cent. of the weight of corn employed, with meal at one cent per pound, chalk or whiting at seven-eighths of a cent, and sulphuric acid at $1\frac{1}{2}$ cents, coal being assumed at \$6 per ton, the cost of materials for one pound of lactic acid is about $4\frac{1}{2}$ cents."

Lactic acid at four and a half cents a pound takes away from the druggists all excuse for charging that many dollars for the same quantity when prescriptions for the medicine come to them.

It is, however, most particularly as Mr. Avery's work furnishes a baking-powder of a character absolutely reliable, both as health and bread-raising are concerned, that the discovery is to be greeted and its author accorded credit. It is certainly not unknown to housekeepers that demerit as to "overlightness or overheaviness in bread is invariably attributed by cooks to lack of reliability as to the material used in the raising, and this, it would seem, not at all unjustly, as inquiry in this direction, made of reputable professional bakers, discovers here similar complaint.

Mr. Avery, after a multitude of experiments, professes to have finally succeeded in formulating a combination for a bread-raiser which can be accepted and recommended as absolutely reliable; this formula being as follows: Mix thoroughly sixty-two and three-tenths parts acid calcium lactate, twenty-four parts bicarbonate of soda, and thirteen and seven-tenths parts flour that has been made thoroughly dry. Of this combination two heaping teaspoonfuls are used to the quart of flour.

In communication with President Thompson, of the Rose Polytechnic Insti-

tute, I find a satisfaction expressed by him arising out of a repetition of Mr. Avery's experiments. "Corn meal," says Prof. Thompson, "is fermented in covered wooden tubs, in the presence of pure carbonate of lime, by the agency of water and a certain portion of lactic ferment. The form of lime used is lixiviated whiting. The lactic ferment is bred substantially in the manner which is described by Gmelin, Wöhler, Beilstein, and others, with certain modifications in manipulation; but nothing enters the 'fermenting-tub' other than the natural products of the lactic fermentation in the presence of lime. What comes out of the tub is normal lactate of calcium mixed with sundry impurities arising from the unfermentable part of the meal, etc., which impurities, being insoluble, are removed by filtration. The filtrate is a clear solution of normal calcium lactate, from which the salt, after concentration, readily crystallizes out. If, now, to a solution of this salt at the proper temperature enough dilute sulphuric acid be carefully added to combine with one-half the lime-radical, gypsum will appear as a precipitate and acid calcium lactate remain in solution. The solution when concentrated and then cooled will deposit the salt in crystalline masses. This salt reacts easily with sodium carbonate to form a calcic sodic lactate, and in so doing evolves carbonic acid gas. Hence its usefulness as a baking-powder. In making up the baking-powder, mix thirteen parts, by weight, acid calcium lactate with five parts bicarbonate of soda."

In Mr. Avery's combination the profession will accept a preparation which, at a present view, seems to be without objectionable qualities; on the contrary, one that, if it do anything outside of its work as a bread-raiser, lends assistance in the way of digestion.

1537 CHESTNUT STREET.

TRANSLATIONS.

THE CULTIVATION OF VACCINE ORGANISMS.—Extremely small micrococci have often been found in vaccine lymph, but all attempts at their artificial cultivation, so as to enable reproduction of active vaccine matter, have, until now, failed. Dr. Quist, of Helsingfors, has, however, succeeded in the solution of this problem,

and has found that their cultivation is only possible in certain culture-fluids when in contact with the atmosphere. In closed capillary tubes no reproduction takes place. The culture-fluid must contain albumen, must be alkaline in reaction, and must be sterilized by warming up to 60° C. every one and a half hours for three days. The best fluid he found to be ox-blood serum, glycerin, and distilled water, of each one part; calcium carbonate one-nine-hundredth part. The culture-fluid is placed in open watch-glasses, under a moistened bell-jar, at 18°–21° C., and a small piece of washed vaccine pustule (one from the eighth to the tenth day) inserted in it. After a few days the upper surface of the fluid possesses the properties of the vaccine lymph, and, after eight or ten days, by oblique illumination it can be seen that the entire fluid is filled with little clumps, which, however, have no tendency to unite with one another. A few days later a gray, pulverulent mass, consisting of innumerable micrococci, settles to the bottom. Inoculation with this fluid, after six days' culture, forms a perfect vaccine pustule.

As regards the protective power of this cultivated lymph against smallpox, of course as yet no proof can be offered; though the fact that in a child a normal pustule was produced by this lymph, and that subsequent vaccination with natural lymph from another child failed to produce any results, furnishes strong presumptive evidence in favor of the protection conferred by the artificial lymph.—*Centralb. f. Chirurgie*, March 15, 1884. s.

POLYPI OF THE LARYNX IN AN INFANT.—Jules Simon reports a case of an infant brought to the Children's Hospital suffering with intense dyspnoea and tracheal whistling so marked as to make it appear like a case of croup. The duration of the attack, however, would not permit this diagnosis, and it was regarded as one of pressure by enlarged glands upon the trachea and bronchi. The child subsequently died of diphtheria, which it was thought to have acquired in the hospital. At the autopsy, a number of papillary growths were found in the larynx. The importance of laryngoscopic examination in such cases is very obvious.—*Journal de Médecine et de Chirurgie pratiques*, January, 1884.

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EDITORIAL.

HOSPITAL PHYSICIANS AND PAY-PATIENTS.

IN an address just published,* Dr. William Hunt, among other topics of interest, incidentally discusses the perennial problem of the relations of the members of the unpaid medical staff and the pay-patients coming under their care in the course of hospital service. Although the practice prevailing in most hospitals is to consider that the services of the physician are due to the institution, and that, when he sends a patient into the wards, he must resign all claim for remuneration for medical attendance rendered during the time that the patient is in the hospital, this position is criticised, and condemned as highly unjust to the physician, by Dr. Hunt, who maintains that rich patients should pay not only their board, but also their doctor. He says, with a good show of reason, "Provided that the hospital does not suffer in purse, but rather profits, as it should do, by taking them, it is nobody's business as to the private relations and understanding existing between them and the physicians and surgeons of the visiting staff whom they may have chosen for advisers or operators."

The legitimate extension and application of the idea that rich hospital-patients should not pay for medical advice, Dr. Hunt thinks, would lead to the formation of joint-stock hospitals, where everybody would be remunerated except the doctors, who would be simply robbed. Another natural result, in our opinion, which may

already be seen in our large cities, is the multiplication of private hospitals and private dispensaries, by physicians and surgeons who have enough independence, enterprise, and energy to establish them in competition with the lay hospitals.

The injustice of the prevailing method of commanding the time and services of the attending physician for the benefit of the better class of patients is very manifest, and it doubtless has had the effect of keeping patients out of the hospital who would have been better cared for in the wards. In the St. Joseph's Hospital, of this city, a patient can employ his own physician. In the German Hospital and the Jefferson Medical College Hospital, the medical staffs enjoy the right of sending patients into the wards, and as long as the fixed charges for treatment are paid, the private agreement, for remuneration for services rendered, between the patient and his physician is not inquired into. It is considered that with this the hospital authorities have nothing to do. But even this arrangement does not include patients who apply directly to the hospitals even though they are abundantly able to pay for medical services. Some such plan, we submit, should be generally adopted in justice to the medical attendants. Any abuses to which it may be subject will be discovered and corrected by experience; certainly the abuse could scarcely be greater than that under which the medical profession is now laboring. In fact, the profession is itself largely responsible for the want of consideration shown it by non-medical boards, for the undignified eagerness displayed in efforts to obtain hospital appointments is so great as almost to justify the popular opinion that the hospitals pay a salary to their medical officers. Unfortunately, this is not their practice; but that, wherever they are not strictly eleemosynary, physicians should be remunerated, is a matter about which there can be no difference of opinion.

* Proceedings of the Alumni Society of the Medical Department of the University of Pennsylvania, with the Annual Address by William Hunt, M.D. Philadelphia, 1884.

MEDICO-LEGAL NOTES.

THE tendency of the courts has been in recent years to limit the exemption from punishment in case of persons possibly insane, and this is noticeably so since the assassination of President Garfield.

If a person can understand the relations of right and wrong, even if his mind be unbalanced, if not positively insane, on some points, the courts will not now direct an acquittal.

A fair statement of the general application of this rule is found in a case just reported in a Western State. It was here held that "if, at the time a deadly assault is made by a defendant, he knew that it was wrong to commit such an act, and had the power of mind to choose either to do or not to do, and of controlling his conduct in accordance with such choice, he will be held amenable to the law, although he was not entirely and perfectly sane; and it is no error to so instruct the jury trying him for the offence."

It will not be a matter of great sorrow to the regular profession to notice that the vendors of patent medicines frequently get into trouble over the question of rival trade-marks, or some other feature of the manufacture of their nostrums.

In a case not long since in the Supreme Court of the United States, between the Manhattan Medicine Company and a man named Wood, it was held that there could not be any valid trade-mark which did not state the exact truth as to the article intended to be protected. It appeared that the nostrum claimed to be "Atwood's Quinine Physical Jaundice Bitters," and to be manufactured by Moses Atwood, Georgetown, Mass. In fact, Atwood was either dead or had long since ceased to manufacture the medicine, and had sold out to the Manhattan Medicine Company, which manufactured the medicine at New York. Under these circumstances, the court held that no protection could be

extended as against persons who closely imitated the label.

In a still more recent case in the Maryland Court of Appeals, the contest was over an imitation of the label on a preparation called "Aromatic Bitters, or Angostura Bitters, prepared by Dr. Siegert at Angostura (now Port of Spain), Trinidad." It was proved on the trial that Dr. Siegert died in 1870, and that a firm was manufacturing the medicine at a place where he never lived. It also appeared that the cover contained a warning against counterfeiters, stating that the signature attached was that of the manufacturer, Dr. Siegert, who had been dead some years in fact. These circumstances showed the plaintiffs to have put forth untruthful statements themselves, and the court refused to help them against persons who also claimed to manufacture the real and genuine "Angostura Bitters."

HYGIENE OF PUBLIC SCHOOLS.

WHILE great care has been bestowed upon the sanitary arrangements of prisons and legislative halls, the needs of the school-children (some of whom probably may have the good fortune to grow up to be criminals or politicians) for fresh air seem to have been very generally ignored or forgotten. As the result of a visit of a member of the Board of Education to some of the school-rooms in Philadelphia, public attention has been called to the matter. The light in sixty-six per cent. of the rooms visited was arranged so as to glare in the faces of the children, the rooms were overcrowded, and in ninety-five per cent. whatever pure air found its way into the rooms had to be admitted through the windows or doors. In many schools the latrines are too near the school, and are usually kept in a foul condition. Since the agitation of the subject, two schools have been closed as unfit for use, and, if Mr. Spangler's convictions are well

founded, many others should be made to close their doors. If there were more willingness among physicians to serve on school boards, coupled with a determination to do their duty without fear or favor, a great many of these abuses might be prevented.

MEMBERS BY APPLICATION IN THE AMERICAN MEDICAL ASSOCIATION.

BY the adoption, on the last day of the session, at Washington, of Dr. Packard's amendment to the Constitution, a new class of members of the American Medical Association was created. We are notified by the Permanent Secretary that any one in the profession who presents his application with the certificate signed by the officers of a local medical society recognized by the National Association, that he is a member in good standing in said society, can become a "Member by Application" on applying to the Secretary. This, we believe, confers all the rights of membership now enjoyed by permanent members of the Association.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

SPRING is here, after a brief but sharp spell of severe northeasterly winds, which carried off the very old people like flies in autumn. Kingsley loved the east wind, just as the Norsemen did; but the Norsemen were not troubled with livers, at least so far as our records go, and the east winds wafted them to their western neighbors. If they were proud of the northeaster, it is more than their degenerate offspring are at the present day. The sharp winds brought out strongly an important clinical fact: there are livers—and livers. One liver becomes upset by a low barometric pressure and a warm wind, as was seen at Christmas; while another liver gets on very well under these circumstances, but becomes deranged when the nor'easter blows. With this latter it is that there is so much failure of nutrition in the case. The liver seems smitten with palsy as regards its func-

tion of the elaboration of albuminoids,—*i.e.*, the albumen coming to it by the portal vein is not elaborated into the serum of the liquor sanguinis, and so the tissues are ill nourished. The waste products of albuminoids, the bile-acids and urine-solids, are found in great quantities. When the assimilating powers of very old people are impaired by age, and the nor'easter comes smiting the liver, then they die off swiftly, but without much constitutional disturbance, like snow melting in a warm wind. Consumptives die "in the bud of the leaf," apparently for the same reason, and all invalids (as a rule) are acted upon injuriously. Tongues with a brownish-yellow shade upon them are common; people have a bad taste in their mouths on waking in the morning,—the bad taste of physical origin from a disordered liver, not the psychical bad taste of an offended conscience, though conscience does seem quickened by the despondency which is an outcome of cholæmic blood-poisoning. Whether the east wind prepares the pious mind for the May meetings of Exeter Hall or not may not be affirmed; but sickness is linked with repentance. "So long as a man is well, he does not repent of his sins; but when he falls ill he becomes sorry for what he has done," remarked Dr. Hughlings Jackson to me some time ago, in speaking of "The Pathological Relations of Sin," or rather of "the Sense of Sin." And we all remember the lines,—

"The devil was ill, the devil a saint would be;
The devil got well, the devil a saint was he."

The pious of evangelical leanings are said to overeat themselves; and, if this be true, "liver-failure" may fitly precede May meetings. The charge of gross feeding against the pious is still urged, as of yore.

"Would you enjoy soft beds and solid dinners?
Then, gallants, board with saints, and bed with sinners."

Such, it seems, is the order of things yet. These relations of the liver to the mood or disposition form one of the problems of medicine not yet worked out, as it may be some day when the practice of physic embraces something more than the physical examination of the chest and the testing of the urine for sugar and albumen,—two important matters enough in their way, and not to be spoken of lightly, certainly.

The great event in the medical world recently has been, not the Medical Bill,—it seems to attract little notice,—but the tercentenary of the University of Edinburgh. The position of the University of Edinburgh has been a peculiar one. When medicine died down at the two great English Universities, the would-be graduate in medicine betook himself to Pavia or Montpellier, if possessed of the means; if not, he graduated in medicine at Edinburgh. In the earlier part of the century most of the graduates in medicine in London were Edinburgh gradu-

ates. Besides classics, rhetoric, divinity, and law, the University of Edinburgh taught medicine, and taught it efficiently, too. Cullen, Craigie, Abercrombie, Alison, the Munros, the Gregorys, and a host of minor lights kept the lamp of medical teaching burning brightly in the modern Athens. Not only did a steady stream of graduates, leaving their native Caledonia, "stern and wild," hold southwards to revenge King Edward, Flodden Field, Pinkie Cleugh, Dunbar, Sheriffmuir, and Culloden on "the false Southron," but a great many Englishmen went North to obtain the coveted degree, with which they posed successfully on their return to their Southern home as "Doctors in Medicine," as compared to the mere "Members of the College of Surgeons" or "Licentiates of the Apothecaries' Hall" around them. Three hundred years have elapsed since the Scottish Solomon built the Edinburgh University, on the site of "Kirk i' the Fields," where his father perished, and of course the heart of Caledonia warmed to the momentous occasion, and forgot all about the attempt to force Episcopacy upon them in the days of Stuart tyranny. The young university soon outgrew in favor the older universities of Glasgow, St. Andrew's, and Aberdeen, which date back to Catholic times. This was the child of the Reformation, and built in the style of the Renaissance. "The First Book of Discipline" came into being about this time, and the Scotch have given themselves to a rigorous rule of Kirk discipline, unequalled anywhere (unless it be in New England), even if their percentage of illegitimate births has been conspicuously high: The first principals, fortunately, were men of high character, and the fledgling went off satisfactorily. The principal was then the leading teacher, with "regent teachers" to help him. This scheme gradually gave way to professors, and of all the area over which English is spoken, nowhere else does a "professor" hold such an enviable position as at Edinburgh. Verily, in modern Athens it is a great thing to be a "professor." There are more sorts than one of "professor" up in the North, however, both with good opinions of themselves, both commanding high prices if taken at their own estimate of themselves. Well, be that as it may, a professor in the University of Edinburgh was somebody in the old days, and is somebody yet. Its medical professors have been men of eminence in the profession, and Sir James Young Simpson, the discoverer of chloroform, was a man of world-wide renown. Again and again has the University of Edinburgh been expanded to meet the waxing demands upon it, the number of its students steadily increasing.

As regards its medical students, a very large proportion now are English, and not from the north of England only, but from

other parts. Its other students are natives almost to a man. And pretty good men, too, are turned out from the Edinburgh school, and many of them doubtless share the sentiment given in the lines of Dr. Douglass Maclagan:

"I yet know not
Upon what spot
In practice I may settle,
Or if folks will see,
As they ought, in me,
A man of sterling mettle."

And go where they will, whether they stay at home, hold south, or go across seas, the Edinburgh graduates are able to hold their own, and usually somewhat more. The close propinquity of the Royal Infirmary to the University linked the two together, and no time was lost in getting from the one to the other. Five minutes did not elapse in passing from Simpson's silvery tones to Syme's manly speech.

A great improvement has taken place in the Edinburgh medical student since the Medical Act of 1858 required a preliminary examination to be passed ere entering upon a course of medical study. Before, every idle young scamp who had tired out the patience of his friends, and must reform as the purse-strings tightened, decided to be a medical student, and read up his Latin for the examination therein, which must be passed before any professional examination could be made. Perhaps in some instances the desired amendment of ways and practices followed, but, as a rule, the reformation was only in name, and these fellows only led other students from the path of rectitude. The act of 1858 made a clean sweep of these undesirable students, greatly to the advantage of the school. Now the students are a set of smart young fellows, bearing a much better reputation than adhered to their predecessors. A good deal, too, of the evil that existed was due to the fact that in Edinburgh students lived where they liked and lived as they liked. All that was required of them was class-attendance and the requisite information at the examination-table. Outside this no one asked any question, with the result that decent people gave a "medical student" a wide berth as soon as his position became known to them. Of course this did not help him much. Now he is admitted into good society and has the chance of associating with decent people. Snow-ball riots were common in the old days, and, when these rough young fellows were aroused, desperate fights with the city authorities took place. The last of the great riots was in January, 1860, since which date the "rows" have been on a less extensive scale.

One great advantage Edinburgh possessed as a teaching-place, and that was the feuds which existed betwixt the different professors and the tendency that prevailed to examine each other's views from a hostile stand-point.

Simpson waged war on Syme, who retaliated. J. Hughes Bennett scoffed at both, and sneered at everybody in a general way. Henderson, the learned professor of pathology, leaned to homœopathy, which drew upon him the animadversions of his colleagues. J. Hutton Balfour, the professor of botany and dean, probably had as deep an insight into the youthful heart as ever man possessed, and the most skilfully planned excuse ("an excuse is a guarded lie") fell dead on his ear. Nobody ever beguiled old "Woody Fibre," who was one of the best-hated men that ever breathed; though, as time went on, the feeling softened, and the whilom student began to see that "Old Woody was not such a bad fellow, after all." He and Bennett both had the habit of remembering a man's offences and misdeeds at the examination-table, which, if not quite fair, exercised a wholesome effect. Christison was as upright in mind as he was erect in figure,—and a grand figure he possessed, even when the weight of years was telling on his faculties. Old Johnny Goodsir, a tall, lean rail of a man, was a grand anatomist, and respected by all. The professors of the present are mostly young, and therefore it is not fair to compare them with the giants of the past. Certain it is that, as a teaching machine, the medical professoriat of Edinburgh is unexcelled by any other in the world. When the time came, good Scotchmen gathered to the northern metropolis to see and be seen. Some English graduates paid no heed to the great doings of their Alma Mater, who to many of them is "an unmotherly old jade," who has precious little to give her graduates, and that little she often bestows upon strangers. Unless "in" with the ruling clique there, no graduate has a chance of an examinership, which is the best thing the old "Mater" possesses.

From far and near the Scotchmen gathered, and the sight of well-known faces, altered by years but not beyond recognition, was welcome to all. Honors were bestowed, of course, and the medical profession in the United States shared therein. A torchlight procession after the first conversazione was brought off successfully without row or mishap. Next day the medical faculty entertained some six hundred guests in the Anatomical Museum (one wonders if the sight around them in any way affected the appetite of those present). Then, in the afternoon, the students played "The King o' Scots," a piece founded on Scott's "The Fortunes of Nigel," out of compliment to the founder, King Jamie, of illustrious memory. And very well played it was, it seems. Then, in the evening, came a conversazione in the Library Hall, and a ball to finish up with. They seemed to have given their minds to the business before them in the way of pleasure. Next day came the conferring of honors. Then more eating. The final act was a students' symposium, or

"smoking concert." It was held in the Drill Hall, and some two thousand were present, and all joined in, juniors and seniors together, the older men forgetting the years that had elapsed since they were students and hobnobbing with their sons and grandsons. Tobacco-smoke filled the place, and the rattling of cups and the clinking of glasses was continuous, except when there was "silence for a song." The Lord Rector, Sir Stafford Northcote, a Conservative leader, made a speech, then Sir Lyon Playfair told a story. Some sang songs, especially Prof. Rutherford, a notable songster. They finished up with "Auld Lang Syne" and the national anthem. Very pleasant tales those present at this "smoking concert" tell of the way it went off. Indeed, the whole affair was a decided success, and those who took a share therein seem pleased with it and themselves. No doubt, with such scattered graduates, such a reunion was very agreeable. Graduates of Edinburgh have few ties binding them to their university. The Edinburgh University Club, in London, exercises little influence, for it only meets to dine together at stated intervals. When a man has passed at Edinburgh, his next business is to get away somewhere; for to stay in Edinburgh is probably to enter the severest contest for success in medical practice to be found on the face of the globe. A limited few hang about, in the expectation of some day being attached to the school, if not of mounting a professor's chair. The bulk seek their fortune over the face of the earth. A number come to London, despite the London University, and make their way slowly but steadily to the front. It was thought the London University would do away with the Edinburgh graduate in London, but here he is still, holding his own, perhaps even stronger than ever. He is usually not afraid of hard work, and is not afraid to bide his time,—and a long time it takes, he finds, to climb the ladder. If in general practice, he certainly succeeds, as he minds his business and attends to his practice,—ways conducive to success. If he aims at a consultant's position, he finds the Southron jealous of him and disinclined to lend him a hand, but he contrives to do without help. His habits are frugal, and he does not waste much of his time in playing cards, or much of his money either; for card-playing is not a Calvinistic institution. He minds his own business, and knows that success in life is attained by so doing, and, consequently, succeeds. But it is not in London alone, but all over the Edinburgh graduate is the same and prospers, unless he takes to whiskey in excess and to opium,—the two rocks on which these men especially split when they do come to grief, as some do. Edinburgh University is the largest contributor to the ranks of medicine of all our universities, the University of Dublin taking second place.

Aberdeen furnishes a number, so does Glasgow. Cambridge has its quota, while Oxford is nowhere. Durham has taken up the Newcastle school of medicine, and sends out a few graduates yearly. Long may it survive, is the wish of all, for Edinburgh has always been strong in medicine; and, though the upas-tree shadow of Bennett's do-nothingness has hung over her with a palsyng influence for a time, little or no harm has been done permanently. An Edinburgh man is taught to do something more than merely observe a patient and charge him for the observations. He tries to earn his money by doing something for it; and we will hope the interference in a case is never harmful to the patient. The tercentenary has come and gone, and it has been a success.

J. MILNER FOTHERGILL.

CHICAGO.

DELEGATES to the National Convention have returned, and all have expressed the greatest satisfaction with the trip and stay in the capital. The mild air and sunny skies of the Potomac quite captivated the visitors, and the wish has generally been expressed that Washington may be designated as a permanent place for meeting.

Our representatives went expecting to hear more of Code matters, and came home disappointed. So far as the Code is concerned we stand upon a sort of neutral ground, half indifferent, ready to yield to the stronger side. Had we better local organizations in the way of medical societies, this feeling of indifference would give place to one of lively interest and healthful expression.

Matters with our medical society have been growing less and less satisfactory, till at last there is a fair division of feeling and purpose. The very junior element arrays itself in opposition to the middle-aged and older members. Being sharp in politics, the young men organized themselves just prior to the last annual meeting, held a caucus, canvassed their several districts quietly, and on the night of the election packed the room with the supporters of their ticket. The procedure was so unusual that the opposition were completely overcome by surprise. There was a good deal of indignation expressed by the conservative members because the choice of officers for the year was the choice of a few young gentlemen of the south division. Let it be hoped that this experience will arouse the representative men to a better sense of their duty in the Society, and that the next election may be conducted more to the satisfaction of the members and the credit of the organization.

Quite recently our superintendents of institutions for the insane have returned from a meeting of the national Association. It ap-

pears rather extraordinary that the superintendents, to the exclusion of others, take upon themselves the representation of this important branch of medicine, when they are in fact the least representative, excepting a few members that may be counted upon the fingers of one hand. With these few exceptions, the members of this Society represent not medical acumen, but political influence, and the more influence the less acumen; and yet they would represent psychological medicine in this country, and would have other nations gauge us by their standard. The assistants upon the medical staffs of asylums should have some representation. They are the real workers in this field, and yet they are insulted every year by being ignored and refused membership in the very Society where they should be respected.

The position of assistant physician is not quite as bad as that of ship's surgeon, but it is one needing reform, that this deserving class of medical men may have some recognition.

A few leading men in the specialty of mental and nervous diseases are trying to organize a Western Neurological Society.

Chicago Medical College has again made several changes in its staff of professors.

M.

CHICAGO, May 17, 1884.

PROCEEDINGS OF SOCIETIES.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

THE Thirty-Fifth Annual Session of this Society was held in the annex to the Union League, Philadelphia, May 14, 15, and 16, 1884.

First Day, Wednesday.—The meeting was called to order at 10 A.M., by the President, Henry H. Smith, of Philadelphia. Prayer was offered by the Rev. John S. MacIntosh, D.D.

Dr. John B. Roberts, in an appropriate address, briefly welcomed the delegates on behalf of the Philadelphia County Medical Society.

The Hon. Robert E. Pattison, Governor of Pennsylvania, was then introduced, and addressed the Society. He referred to the great distinction which the State of Pennsylvania derived from the character and reputation of the members of the medical profession, and, continuing, said, "Any allusion to the greatness of the medical profession in this State at this time awakens the saddest feeling of deprivation, by recalling the recent irreparable loss of that great man to whom more than to any other is owing our fame in medical science, and whom you all regarded with so much pride and veneration, to whose masterly mind two continents paid tribute, and who held the

triple honors of Oxford, Cambridge, and Edinburgh."

The reports of the delegates to the various Societies were next received.

The Committee on Publication made its report, and offered a resolution as follows:

"Resolved, That in the future no paper read before the Medical Society of the State of Pennsylvania shall be printed in the Transactions if it has previously been published elsewhere, unless such previous publication be simply in abstract."

Dr. O. H. Allis offered an amendment, providing that no abstract of a paper read before this Society be published without the approval of the Publication Committee.

After considerable discussion, the whole matter was referred to a committee of five, to report on Thursday morning.

Reports from the medical examiners of nine counties were received, stating that the number of students examined was seventeen, and that of this number fifteen were found to be qualified.

The Committee on the Appeal of the American Anti-Vivisection Society made an extended report, and recommended the adoption of the following:

"Resolved, That, in view of the attempts which have been made or are to be made to obstruct by restrictive legislation the progress of experimental medicine, this Society desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical sciences, that it is the means by which many important discoveries, both practical and scientific, have been accomplished, that its direction and supervision can be properly intrusted only to members of the medical profession, and that its restriction or prohibition by law would inevitably retard the acquisition of knowledge in respect to healthy and morbid actions, the cause and prevention of disease, and the improvement of medical art."

The resolution was adopted.

The following amendment, offered on behalf of the Philadelphia County Medical Society by Dr. H. Leffmann, that "No paper shall be read before this Society unless the same has been previously read, either in full or in abstract, before a County society, and by it referred to this Society," was indefinitely postponed.

Dr. E. A. Wood, of Allegheny, moved that a committee of seven be appointed to prepare and report at this session a plan for organizing a society to secure a State Board of Health.

Adopted.

The President appointed on this committee Drs. E. A. Wood, A. M. Pollock, Benjamin Lee, H. C. Wood, H. Corson, W. Varian, and H. L. Orth.

Dr. J. V. Shoemaker, of Philadelphia, offered a resolution endorsing an act to regu-

late the practice of pharmacy and sale of poisons, and to prevent the adulteration of drugs and medical preparations; and recommending Legislature to pass this act at its next session.

Adopted.

Dr. Birdswell, of Susquehanna, offered a resolution that the President appoint a committee to prepare a resolution expressing the sentiments of the Society in regard to the use of intoxicating liquors as a beverage, and to report as early as possible.

The motion to adopt this resolution was lost.

Afternoon Session.—A resolution was adopted thanking Governor Pattison for his address and requesting a copy of it for publication.

In a paper on a "Pennsylvania State Board of Health," Dr. E. A. Wood, of Allegheny County, showed the advisability of having such an organization in this State, and at as early a date as possible.

The paper was referred to the Committee on Publication.

The address in Hygiene and State Medicine was read by Dr. Benjamin Lee, the doctor taking for his subject "The Present Outcome of Sanitary Agitation in Large Cities of the United States."

The author stated that in no department of governmental supervision does the United States make so poor a showing, as compared with European countries, as in the care of the public health. In small communities much may be done to overcome this evil by private effort. In order to interpret the teachings of hygienists to the masses and impress upon them their importance, voluntary sanitary associations are required. The first of these was started in Newport, Rhode Island. Now there are one hundred and seventy-five of these associations in operation throughout this country.

They are designed to assist the public health authorities where such exist, and to take their place where health boards have not been established. In large cities the attempt has been made to overcome the evil by the formation of stock companies, who are to examine dwellings and correct sanitary defects. This should be the duty of the State and municipal governments, but when they fail to do their duty it becomes the duty of private citizens to attend to these matters.

Referred to the Committee on Publication.

The next paper was by Dr. Henry Leffmann, and was entitled "Proper Medical Education."

In this paper he objected to the ordinary division of medical studies into seven branches. Hygiene, the study of diseases of the mind, and medical jurisprudence have so developed that they might with propriety be taught by separate chairs. He thought that there could be no objection, in view of the success at-

tained by dentistry, to the establishment of degrees of doctor of otology, ophthalmology, and so on. He also thought and expressed the opinion that the licensing board should be separated from the teaching body.

Referred to the Publication Committee.

Dr. T. H. Fenton read a paper on "Hygiene in the Public Schools." After alluding to some established principles of hygiene, Dr. Fenton criticised the appointments of schools for children in this city. The location of many school-buildings is faulty. They are not so situated as to receive a proper amount of air and light. The ventilation is frequently defective. The desks are often so situated that the light falls directly on the scholar's face. The amount of recreation was not sufficient, while the hours of study were too long. After pointing out these various defects, methods of removing them were indicated.

Referred to the Publication Committee.

The address in Medicine was delivered by Dr. Alice Bennett, of the State Hospital for the Insane at Norristown, on "The Relation of Heart-Disease to Insanity." Some reference to current literature was made, in order to show how little attention has been paid to the influence of cardiac disease in producing changes in the brain, and a review of what had been written on the subject was given. The paper referred particularly to the occurrence of cardiac disease in connection with chronic mania. In such cases the first symptoms are hallucinations of one or more senses, usually of hearing, and subsequently accompanied with delusions of persecution. Some of these cases may become dangerous, while many of them are simply turbulent and noisy.

A series of sixteen cases illustrating these points was given, and most frequent forms of cardiac disease were referred to.

Referred to the Committee on Publication.

The Society was, during the afternoon, visited by the Association of Superintendents of Insane Asylums, who entered the room during the reading of the above paper.

The last paper of Wednesday's session was read by Dr. R. H. Chase, also of the Norristown Hospital, whose topic was "The Protective Rights of the Insane of Pennsylvania." The history of the various movements for the protection of the insane from the time of the establishment of the first insane asylum up to the present time was given. The legislation which had recently been enacted was fully described, and the statement was made that in the State of Pennsylvania the protective rights of the insane were equal to those of any part of the world, and, on account of the many precautions which had been provided, he believed that unjust retention in an insane asylum was entirely impossible. The law calling for the removal of all insane from the almshouses should be en-

forced, and he thought that separate provision should be made for the criminal insane.

Referred to the Publication Committee.

Dr. John B. Roberts, of Philadelphia, made some remarks in regard to the insufficient requirements of the medical schools, and, to overcome the difficulties, offered a resolution providing for the appointment by the Nominating Committee of a committee of seven, who should procure from the Legislature a charter for a medical college to be established in Philadelphia or Allegheny County, the committee to be known as the "Committee on Medical College." This college was to insist on a preliminary examination, a three years' graded course, and an examining board appointed by the Society. If the colleges now in existence adopted within one year the course laid down in these resolutions, the committee were to do nothing in the matter.

The point of order was raised that this was practically an amendment to the constitution, as it provided for a new committee to be nominated by the Nominating Committee, and therefore must lie over for one year.

This led to considerable discussion, during which the hour of adjournment arrived, and the whole matter was laid on the table.

Adjourned.

Thursday Morning Session.—The meeting was called to order at ten o'clock.

The first business was the naming of a member from each county to serve on the Nominating Committee.

Dr. Benjamin Lee, the Treasurer, made a report, showing a balance of \$2451.85 in the treasury.

The address in Medicine was delivered by Dr. W. H. Daly, of Allegheny. The doctor, after referring to the experiments of Koch and Pasteur, concluded that the results which they had attained were far less valuable for therapeutic deduction than the results of careful clinical observation, and that, of the two methods, this was the one which physicians should adopt. The discovery by Jenner of vaccination was pointed out as one of the results of clinical observation. The writer did not underrate the value of scientific research, for this served to qualify the student better for accurate clinical observation. In order to carry on such experiments as those of Koch and Pasteur, facilities are required which few physicians could command.

In reference to specialists, the doctor thought that it was through them that many of the advances in science had been made. Among others, he referred to the discovery of the errors of refraction and accommodation by Donders, and to the introduction of the operation of iridectomy for the relief of glaucoma. He then referred to the great advances which had been made in laryngology. He referred to several cases in which the specialists had corrected a faulty diagnosis

made by the general practitioner. He accepted Dr. Hodgen's statement that a specialist should be a physician and something more; too often he is something less. In many cases it is not that the physician seeks the specialty, but that the specialty seeks him by natural selection.

Dr. E. A. Wood objected to the remarks of the previous speaker in reference to scientific experiments. He considered them very important, and thought that the profession should be encouraged to persevere in them.

Referred to the Committee on Publication.

The next paper was on "Disorders mistaken for Hydrophobia," by Dr. Charles W. Dulles.

He considered hydrophobia to be a rare disease, and that in many cases in which this affection was supposed to exist some error of diagnosis was made. One symptom on which much reliance was put as a diagnostic sign was the dread of water, which was frequently absent in cases of the true rabies. He then pointed out some of the many affections which might be confounded with hydrophobia. Among these are certain diseases of the nervous system, as acute mania and delirium and tetanus. Mania-a-potu would sometimes account for the symptoms. Hysteria sometimes simulates this disease. The symptoms produced by the remedies commonly employed in the treatment of hydrophobia are often very similar to those of the disease itself. The doctor thought that the condition of the mind had much to do with the appearance of the symptoms and also the fatal issue.

Dr. Traill Green, of Easton, agreed with the speaker that many cases of so-called hydrophobia were instances of mistaken diagnosis. He had never seen a case of hydrophobia in a man, but he had seen one rabid dog. He asked how many of the persons present had seen a case of hydrophobia. (A half-dozen members said that they had seen such cases.)

The doctor pointed out the foolishness of having dogs muzzled during the summer months, for it has been found that dogs go mad at other seasons of the year as well as during dog-days. The speaker thought that there was a far more serious form of hydrophobia about, to which little attention was paid.

Referred to the Publication Committee.

"The Principles of External Treatment in Diseases of the Skin" was the title of a paper read by Dr. Arthur Van Harlingen.

A few years ago, but four external remedies were principally employed in the treatment of skin disease. These were arsenic, oxide of zinc, mercury, and sulphur. The first two were used in what was called eczema, which was a general name under which many different affections were grouped, the third in syphilitic disease, and the last in the itch.

Some of these errors had been removed by the teachings of Dr. Duhring, but the subject was still a difficult one. He thought that it would be a good plan to class the more common external remedies according to their effects. By so doing, certain principles of treatment might be educed which would enable the physician to treat many forms of diseases of the skin from their appearances, without requiring a complete knowledge of the nomenclature and classification of dermatology. The writer went on to give a classification of the various remedies according to the effect on the skin.

The object of the paper was to suggest certain lines of treatment which might be of service to the general practitioner.

Referred to the Publication Committee.

"Jequirity" was the title of a paper by J. V. Shoemaker, M.D.

The activity of this agent was attributed to the fact that it forms a rich culture-field for bacteria, for when these are destroyed by boiling or antiseptics, the infusion was found to be inert. The use of this drug in certain forms of diseases of the eye had suggested its use in certain morbid cell-growths of the skin. As tests, lupoid conditions, epithelioma, and sloughing ulcers had been selected. It was soon found that the infusion used in ophthalmic practice was not strong enough, and a stronger preparation was obtained.

When first applied, this causes no pain, but produces a very severe inflammation. Thick crusts are formed, under which the process of repair takes place. Under repeated applications of this remedy cures are effected. The remedy is to be used with caution. (Cases of lupus were shown completely cicatrized.)

Referred to the Committee on Publication.

Dr. J. H. Musser read a paper on "A Modification of the Sphygmograph," in which, after recounting the disadvantages of the ordinary Pond instrument, he described a modification which Dr. Mateer devised, by which time would be saved and the instrument brought into more general use. The base of the old instrument was too large. This had been so modified that it closely fitted the vessel at its most prominent part. The instrument was exhibited, and drawings shown indicating the alteration.

Referred to the Publication Committee.

A paper on "Bronchitis and Pneumonia of Rheumatic Origin" was next read by Joseph B. Potsdamer, M.D.

Rheumatic bronchitis has its seat in the fibrous tissue of the bronchi, while rheumatic pneumonia is always secondary to rheumatic bronchitis. The doctor next referred to the symptoms of these affections. The diagnosis is to be made, as a rule, by exclusion.

If, in rheumatic pneumonia, the disease be recognized at an early stage, the prognosis is favorable.

The treatment is the same as for other

rheumatic conditions. Illustrative cases were cited.

Referred to the Publication Committee.

Dr. Traill Green read a paper entitled "A Plea for Chemistry."

The doctor referred to the indifference of students to this branch of medical education. He next referred to some of the results which had followed improper combinations. Glycerin should never be added to easily-oxidized agents, as the permanganates, chlorates, and chromic acid. A case was reported in which a solution of chlorate of sodium used for rhus-poisoning had been allowed to accumulate on the hands, and it had taken fire from bringing it too near a flame. Many other instances were given illustrating the ignorance of many members of the profession on these matters.

Referred to the Publication Committee.

Adjourned.

Thursday Afternoon Session.—On motion, Friday morning was allotted to Dr. Joseph Leidy to present a resolution in reference to the Anatomical Bill of Pennsylvania.

The Nominating Committee reported the following officers for the ensuing year:

President.—E. P. Allen, M.D., Bradford.

Vice-Presidents.—Drs. Jacob Price, Chester; D. M. Bland, Columbia; C. Brandes, Erie; and S. R. Rutledge, Blairsville.

Permanent Secretary.—Dr. William B. Atkinson, Philadelphia.

Recording Secretary.—Dr. A. T. Cornell, Lackawanna.

Corresponding Secretary.—Dr. John G. Lee, Philadelphia.

Treasurer.—Dr. Benjamin Lee, Philadelphia.

Committee on Publication.—Drs. John B. Roberts, Philadelphia; Henry Leffmann, Philadelphia; and E. Jackson, Delaware.

The next meeting to be held on the second Wednesday of May,* 1885, at Scranton, Lackawanna County.

Chairman of the Committee of Arrangements.—Dr. J. F. Everhart.

The associates to be selected by the Lackawanna County Medical Society.

Dr. John B. Roberts declining, Dr. R. J. Duglison was named to fill the vacancy in the Committee of Publication.

The report of the Nominating Committee was accepted and the officers declared elected.

The address in Obstetrics was delivered by Dr. Jacob Price, of West Chester.

The reader spoke in detail of the treatment of the vomiting of pregnancy. He recommended rest, the use of salines when required, and local applications of iodine and carbolic acid.

In regard to abortions, one of the important causes was flexion. The tampon should

be used. The immediate removal of the placenta and membranes by instruments was condemned.

In puerperal convulsion the remedies recommended were venesection, which was considered the most important, bromides, chloral, morphia, and, where the kidneys are inactive, pilocarpin.

In puerperal fever, cleanliness, antiseptics, and vaginal irrigation were recommended.

Referred to the Committee on Publication.

Dr. Benjamin Lee, of Philadelphia, read a paper on "Massage, the Latest Handmaid of Medicine."

Four methods were described,—viz., stroking, kneading, friction, and percussion. Vibration as a modification of kneading was also referred to. One of the great advantages of massage in the treatment of disease is that it leaves no unpleasant after-results. In summing up, the doctor said, "Whenever we want to profoundly modify the process of nutrition, to remove effete material from the system, to stimulate assimilation and invigorate digestion, to soothe nervous irritability and relieve nerve-pain, to remove morbid deposits from around inflamed joints, to equalize the circulation, sending the blood from the hot head, the congested spine, or the laboring heart to the cold extremities, we shall, if we are wise, use massage."

Referred to the Committee on Publication.

A paper on "Diphtheria" was then read by L. B. Kline, M.D.

The disease was defined to be "an acute, specific, contagious, and infectious disease, of a miasmatic character." Examples showing its infectiousness were given. The indications for treatment are to destroy the local lesions, so as to prevent further absorption, to neutralize as much as possible the absorbed virus, and to support the system. As a local application, tincture of the chloride of iron and glycerin is relied on. Carbolic acid and glycerin may also be used.

As a gargle, the following is recommended:

℞ Acidi lactici, gtt. xx to xxx;
Spr. rectificati, ℥ijss;
Glycerinæ, ℥ss.

Sig.—Add a tablespoonful to a glass of water, and gargle frequently.

Internally, quinine, iron, and chlorate of potash are necessary. Nourishment must be insisted upon. When the disease involves the trachea, the spray is to be used.

Referred to the Publication Committee.

Dr. H. C. Wood was called upon to give his views in reference to diphtheria.

Dr. Wood gave a review of the experiments which he, with Dr. Formad, had been conducting for the last three or four years. They had in numerous instances produced the disease in animals by the use of matters from diphtheria in man, and the doctor thought that he had seen at least two instances in which children had taken the disease from

* On Friday, the time for the next meeting was changed to the last Wednesday of May, instead of the second.

cats. They had come to the conclusion that diphtheria is produced by a micrococcus which is in every man's mouth. Diphtheria, in the great majority of cases, is primarily a local disease. The injection of the poison into the blood produced no effect unless there was a local lodgment of the poison. It had also been found that as long as the micrococci did not invade the white blood-corpuscles the prognosis was favorable, but as soon as they were found within the blood-globules the fate of the individual was sealed. The same was true in cases of scarlet fever and measles.

Diphtheria had been produced by material from puerperal metritis, sloughing sores, and gangrenous ulcers, and the conclusion had been reached that diphtheria is in reality not a distinct disease, but nothing more or less than a putrid sore throat.

Dr. Wood was requested to furnish a copy of his remarks for publication.

"The Work of Women Physicians in Asia" was reported by Mary H. Stinson, M.D.

In this article a history of the work of women physicians in Asia and Africa, and the possibilities which were afforded by their employment as medical missionaries, were discussed.

Dr. J. A. McFerran exhibited an obstetrical forceps jointed at the junction of the blade and the shanks.

In certain cases, delivery cannot be effected with any of the ordinary forceps, but the forceps exhibited leaves the head free to deflect, flex, or extend. The action of the forceps was illustrated on a model.

Referred to the Publication Committee.

Dr. Benjamin Lee, of Philadelphia, showed two splints for the treatment of disease of the hip-joint. One was the ordinary splint, which kept the joint rigidly fixed, while the other was one which allowed motion of the joint and at the same time produced extension. The latter was considered by far the better, its principal advantage being that extension was made while motion of the joint was permitted. He presented a case which he had treated in this way sixteen years ago. When first seen, the disease was in the third stage. He presented him cured, and requested that a committee be appointed to examine the man and report. Drs. O. H. Allis, De Forrest, Willard, and Pollock were appointed by the President to examine the patient.

The following resolution was offered by Dr. Jackson:

"Resolved, That a committee of seven be appointed by the chair to inquire as to the best method of making the diploma which permits a man to enter upon the practice of medicine in the State of Pennsylvania a real guarantee of his qualification for the work, the committee to report at the next annual session of the Society."

Dr. Gates offered the following substitute:

"Resolved, That a committee be appointed

to urge upon the Legislature the passage of an act creating a State Board of Examiners to license persons to the practice of medicine."

Following this were a series of provisions, stating how the board should be constituted, and fixing its duties.

This was decided to be out of order, as covering a different ground from that of the original resolution.

Dr. Jackson's resolution was so amended that the committee should report on Thursday morning of the next session, and that this time be set apart for the discussion of the subject.

The resolution, as amended, was adopted.

Adjourned.

At 8 o'clock in the evening, Dr. Henry H. Smith delivered the President's Annual Address.

His theme was "The Importance and Usefulness of Scientific Medical Organizations to our Profession and the Public."

After defining a society, the history of the formation of the first organizations of individuals was given. Soon after the formation of these societies, it became necessary to adopt rules for the government of the members, and, in order to make these rules operative, it was found necessary to add a penal clause. A code of ethics, therefore, is almost as old as societies themselves. The Pennsylvania State Society was formed in 1848, the first meeting being held in Lancaster.

In reference to the controversy in regard to consultations with those who profess to practise exclusive systems, there can be no question as to what is the proper course. The Code of Ethics has settled that. Any change in it must come from the American Medical Association.

It was suggested that, in connection with State Medicine, the present method of carrying out the sentence of capital punishment was barbarous, and did not correspond with the scientific progress of the age. Electricity would no doubt be more efficient, and reference was made to a chair devised for this purpose.

In concluding, the hope was expressed that the present session of the Society would promote not only the hygienic interests of the Keystone State, but also those of other communities.

Friday Morning Session.—At the opening of the session, Dr. Levis, of Philadelphia, presented a resolution of regret at the absence from the Society of one of its most honored and venerable members, Dr. John L. Atlee, of Lancaster.

Adopted.

Dr. Joseph Leidy, as chairman of the Anatomical Board of Pennsylvania, presented the following:

"Resolved, That the Medical Society of the State of Pennsylvania, recognizing the im-

portance of anatomy, and duly appreciating the recent acts of Assembly providing for the efficient distribution of dead human bodies, recommend the members of the medical profession throughout the State to encourage the Anatomical Board in carrying out the provisions of the act."

Drs. J. Ewing Mears and Traill Green spoke in favor of the resolution.

The resolution was adopted, and the Permanent Secretary instructed to send a copy to the secretary of each county medical society, with the request that it be read to the society as early as possible.

The address in Ophthalmology was delivered by William S. Little, M.D., on "The Value of Pupillary Symptoms in General Disease: An Analysis of One Thousand Cases." After a general consideration of the value of alterations in the size of the pupil, which are more commonly found in diseases of the cerebro-spinal system than in other affections, the speaker went on to give a summary of the cases which he had examined.

Referred to the Committee on Publication.

Dr. Edward Jackson, of Chester County, read a paper entitled "Alarming and Dangerous Doses of the Mydriatics." The popular idea in regard to the poisonous properties of the various mydriatics has but little foundation in fact. A large number of cases of poisoning have been recorded, but in very few of these has death resulted. The doctor summed up with the following conclusions:

For adults the minimum fatal dose of atropia is not less than the minimum fatal dose of morphia.

For children two years old the minimum fatal dose of atropia is not less than that for adults, and it is very probable that the same is true of daturia and hyoscyamia.

Proper care should, however, be taken to avoid unpleasant symptoms. These symptoms are not to be considered more dangerous than the symptoms of intoxication from alcohol or ether.

Referred to the Publication Committee.

Dr. Albert G. Heyl read a paper on "A Form of Epithelial Mycosis." This is a parasitic disease of the cornea, which is accompanied by severe and often fatal symptoms. The parasite induces fatty degeneration of the epithelial cells. The disease generally begins with hemeralopia. In a month or two this may be followed by ulceration of the cornea. General symptoms then appear. There is fever, a peculiar apathy, purging and vomiting follow, and the patient often succumbs to broncho-pneumonia.

It was thought probable that the symptoms were traceable to the epithelial mycosis, and it was suggested that the epithelial cells were the receptive organs of centripetal nerves.

Dr. Carl Seiler exhibited a new form of electric laryngoscope which he had invented. A small incandescent lamp is mounted on an

arm about four inches long, which is attached to the ordinary head-mirror. A double-convex lens is inserted between the mirror and the lamp. The advantages of this arrangement are that it gives off very little heat, the light is whiter, and, if the electricity gives out, the mirror can be used as an ordinary head-mirror.

"Does a Chronic Discharge from the Ear make Life-Insurance Hazardous?" was the subject discussed in a paper read by Dr. C. S. Turnbull, of Philadelphia. He maintained that the existence of a chronic ear-disease rendered the risk extra-hazardous. He suggested an ocular examination of the ear in all cases, and, where the interests involved were large, the ears should be examined by an expert. He recommended that physicians, in examining for life-insurance, should test each ear separately with the watch, the eyes being covered, that the auricular region should be carefully inspected, and the part should be examined nasally for any odor.

The next paper, by Dr. P. D. Keyser, was entitled "Some Ophthalmological Observations." In pterygium the operation of the ligature was considered the best. Glioma was next considered, the proper treatment being early enucleation. If the nerve or brain be involved, this operation should not be performed.

Referred to the Publication Committee.

The address in Surgery, on "Surgical Delusions," was delivered by Dr. J. B. Roberts.

The belief in the safety of chloroform was the first delusion referred to. The second was in reference to the value of styptics: these often do harm, and are never necessary. The next delusion was the fatality of small hemorrhages. A person can lose a much larger quantity of blood without danger than is generally supposed. In regard to trephining the skull, it was thought better to err on the side of action than on that of inaction. The fear of the operation of trephining often leads the surgeon to leave unsuspected serious fractures of the skull. The doctor then referred to delay in operating on strangulated hernia, to delay in opening acute abscesses, and to delay in the removal of malignant tumors.

Among other delusions referred to were the necessary fatality of traumatic tetanus, the fatality of wounds of the heart and pericardium, the symmetry of normal limbs, and the uselessness of treating vicious union of fractures.

"The Operative Treatment of Purulent Pleural Effusions" was the title of a paper contributed by Drs. E. T. Bruen and J. William White.

After referring to a number of cases, with their symptoms and treatment, the writers offered the following conclusions:

The formation of purulent effusions is dependent on lowered vitality, the scrofulous diathesis, or intercurrent disease.

The diagnosis can be made only by puncture.

In children, one or two aspirations will often effect a cure: if they do not, incision of the chest, without the use of a drainage-tube, is usually all that is necessary.

In older children, and in adults, it is proper to aspirate at once: if recovery do not result promptly, a large drainage-tube should be inserted at the most dependent point.

If drainage be defective, a second opening should be made, and a tube carried directly across the base of the chest.

If after from two to four months there should be no disposition to permanent closure, and if there are indications that the lung is capable of expansion, it is proper to remove a certain portion of the ribs of the affected side.

If drainage be thorough, injections are not required.

Where the lung is bound to the diaphragm, and there is no possibility of expansion, or where it is the seat of tuberculous or inflammatory infiltration, the operation is contra-indicated.

Dr. C. B. Nancrede, of Philadelphia, read a paper on "The Bichloride of Mercury in Surgical Practice."

The teachings of Lister and the introduction of greater cleanliness and the use of antiseptics have had a marked effect in diminishing the mortality after surgical injuries. Statistics were given showing the mortality under different plans of treatment, and proving the great value of antiseptic methods.

Corrosive sublimate has been shown to be the best germicide. One part in four thousand is efficient, while one part in one thousand is as strong as is ever required. The method of employing this dressing is as follows: The part is cleansed and washed with a solution of turpentine in alcohol (1 to 7). The sponges used are kept in the corrosive chloride solution (1 to 2000). The instruments are kept in a carbolic acid solution, because the mercury acts on the steel. The operation having been completed, one or two drainage-tubes are introduced: the wound, having been syringed with the antiseptic solution, is dressed with compresses of gauze which have been immersed in the same solution. These are held in position with bandages which have been treated in the same way.

No bad effects follow the use of this agent. Occasionally a slight erythema, and at times, when the application has been continued for a long time in susceptible individuals, slight constitutional symptoms, may appear, but these are relieved by omitting the dressing for a few days. The doctor then cited cases from his personal experience, showing the advantages of this method.

Referred to the Committee on Publication.

The Judicial Council made a report in the case of the appeal of Dr. Cotton, of the Tenth

District, and recommended that the case be recommitted, on account of certain technical reasons, to the censors of the Tenth District, with instructions to return the case to the Crawford County Society for early action.

Adopted.

The President announced that the committee of inquiry under the resolution of Dr. Jackson would consist of Drs. E. Jackson, Delaware; Traill Green, Northampton; J. B. Deaver, Philadelphia; Henry Leffmann, Philadelphia; — Gates, Allegheny; and Frank Woodbury, Philadelphia.

The committee to which the report of the Publication Committee and the accompanying resolutions had been referred reported the following:

"Resolved, 1, That all the papers read or appointed to be read before this Society become thereby the exclusive property of the Society, and the author has no right to publish or cause to be published the paper or any part of the same without the consent of the Society. The Committee on Publication shall not be at liberty to publish any paper that has been published in violation of the above requirements.

"Resolved, 2, That the Medical Society of the State of Pennsylvania looks with great disfavor upon the making use of this organization as an advertising medium, and holds such practice as contemptible, as a flagrant violation of the spirit of the code of medical ethics."

This provoked considerable discussion, and, the hour of adjournment arriving, the matter was laid on the table.

Adjourned.

Friday Afternoon Session.—The first paper was read by Dr. De Forrest Willard, on "The Non-Necessity of Tarsotomy in Talipes in Children."

After reporting a number of illustrative cases, the following conclusions were given:

In children under ten years, even in extreme cases, subcutaneous division of all the contracted tissues with powerful manual force will restore the foot to its proper position.

Fixation needs to be continued but a short time, when stretching, and an apparatus to encourage muscular action, should be employed.

Tarsotomy should be limited to cases in which moderate measures have failed, and to adults with deformed tarsal bones.

"Chronic Articular Osteitis of the Knee-Joint" was presented in a paper by Dr. A. Sydney Roberts.

After a review of the pathology and symptoms of this affection, he described a splint which he had devised for its treatment, and presented a case illustrating its method of employment.

Referred to the Publication Committee.

Dr. W. S. Janney exhibited a case of unusual displacement of the trachea by a tumor,

with the tracheotomy-tube inserted two inches to the left of the median line of the neck. The man was admitted to the Philadelphia Hospital. The operation of tracheotomy was attempted in the usual manner, but the trachea was not in its normal position, being pushed to the left by a mass of enlarged lymphatic glands. After considerable difficulty, a tube was inserted in the trachea: there was an immediate relief to the dyspnoea. At a later period the lymphatic glands suppurated, and a number of them were removed.

The case was presented to the Society.

Referred to the Publication Committee.

The resolution in regard to the publication of papers read before the Society was taken from the table.

Dr. George Strawbridge, of Philadelphia, moved to amend, that the chairman of the Publication Committee be authorized to publish abstracts of the papers read at the meetings of the State Medical Society, the same not to interfere with the regular authorized yearly report.

An amendment to the amendment, that the members should furnish abstracts to the chairman of the Publication Committee, was lost.

Dr. Strawbridge's amendment was adopted, and the resolution as amended was adopted.

The second resolution was also adopted.

One hundred dollars was appropriated to the Committee on Medical Statistics, to be spent in the collection of statistics.

A report, signed by Drs. E. A. Wood and A. M. Pollock, was received from the committee in regard to forming a plan for the organization of a State Board of Health, recommending that the President appoint one or more members from each county to serve as the new society. Other provisions followed, indicating the duties of these members.

The report was accepted.

Dr. Pollock moved that when the Society adjourn it adjourn to meet on the last Wednesday of May. It was stated that this would suit the Scranton delegation better, and would also give the members attending the meeting of the American Medical Association more time to return.

Adopted.

On motion of Dr. Benjamin Lee, the Committee on Vivisection was given the privilege of publishing its report in full in advance of its publication in the Transactions.

Dr. De Forrest Willard reported that he had examined the case of hip-joint disease presented by Dr. Lee, and had found the two limbs of the same length, good extension, but flexion beyond a right angle and rotation impaired. There was no induration about the joint, and the man walked with facility.

A telegram was received from Dr. John L. Atlee, thanking the Society for its kind message and regretting his inability to be present.

The Permanent Secretary was authorized to employ such clerical aid as he might require in making abstracts of the papers.

Bills to the amount of \$285.69 were ordered paid.

The following were appointed to prepare the regular addresses for the next session: Surgery, E. A. Wood, Allegheny; Obstetrics, C. A. Rahter, Dauphin; Hygiene, J. J. Richardson, Philadelphia; Mental Diseases, S. S. Schultz, Montour; Medicine, E. T. Bruen, Philadelphia; and Otology, C. S. Turnbull, Philadelphia.

Dr. Turnbull offered resolutions endorsing the action taken by the Alumni Association of Jefferson Medical College in reference to the erection of a monument in Fairmount Park to commemorate the greatness of Prof. S. D. Gross, and providing for the appointment of a committee of five to act with the Alumni Association.

Adopted.

On motion of Dr. H. Leffmann, it was decided to set apart one page of the coming volume of the Transactions, on which should be printed the above resolutions, and that this page should be known as the Gross Memorial Page.

The retiring President then introduced the President-elect in a few graceful remarks.

Dr. E. A. Allen, in assuming the chair, thanked the members for the honor which had been conferred upon him, and which he felt the more from having been elected to the office in Philadelphia, the cradle and nursery of medical science.

The question of binding the next volume of the Transactions of the Society was left to the discretion of the Publication Committee.

After passing votes of thanks to the retiring officers, the County Medical Society, etc., the Society adjourned.

W. H. M.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE Sixth Annual Congress of the American Laryngological Association, which was held on May 12, 13, and 14, in New York, like many of the former meetings, was full of interest, on account of the large number of scientific and interesting papers which were read and discussed. Representing, as they do, the progress in the department of laryngology and rhinology in America for the past year, it will, no doubt be interesting for the readers of the *Medical Times* to peruse a condensed report of the proceedings, rather than a review of the literature recently published in these specialties.

The President, Dr. FRANCKE H. BOSWORTH, of New York, opened the meeting by an address of welcome, and then read a paper on "The Clinical Significance of Fibrinous Exudations upon the Mucous Membranes of the

Upper Air-Passages," in which he held the view that the affections of the mucous membranes of the upper air-passages characterized by fibrinous exudation were essentially different from simple catarrhal inflammations, and were akin to an essential fever, not differing materially from an exanthem, the local lesion being evidence of a general affection by a micro-organism. He cited follicular tonsillitis and pharyngitis as examples of a mild type, while croupous tonsillitis in children was of a more grave nature, being frequently the forerunner of croupous laryngitis. He regarded diphtheria and croup as distinct diseases, but at the same time both are due to micro-organisms, and closed his paper with the propositions that fibrinous exudation occurring in the crypts of the tonsils and upon the mucous membrane of the lower pharynx has no tendency to extend, and is self-limited; that the fibrinous exudation which occurs upon the surface of the tonsils runs a course and presents an appearance by which it can be recognized; that a croupous inflammation of the mucous membrane of the fauces in adults is a self-limited affection; that when the same disease occurs in children there is direct danger of a new centre of inflammation developing in the larynx; that diphtheritic membrane developed in the fauces marks a disease dangerous to life, with a marked tendency to development of the same process in the larynx.

In the discussion which followed, Dr. BEVERLEY ROBINSON took exception to several of the statements made in the paper, and particularly in regard to the causation of these fibrinous exudations by micro-organisms. He also believed that there are cases which have been termed herpetic tonsillitis, and which should be regarded as such, and not as cases of follicular tonsillitis, as indicated in the paper.

Dr. W. C. JARVIS concurred with Dr. Robinson.

Dr. F. T. KNIGHT, of Boston, called attention to the fact that an increased susceptibility to diphtheritic infection exists in those who have an acute affection of the mucous membrane of the upper air-passages.

Dr. BOSWORTH, in closing the discussion, said that he concurred with Dr. Knight, and that the mucous membrane in a state of acute catarrhal inflammation is a favorable medium for the lodgment of the germs which produce the diphtheritic process, without there being necessarily any connection between the two processes. The paper contained so many points of interest, and the views expressed therein were frequently so widely different from those generally accepted, that the discussion was perhaps less instructive than it might have been had there been but one or two points thrown out for discussion. However, as regards the germ-theory of the production of diphtheria and croup, the views of

most of the members were different from those expressed in the paper, and, although it may be admitted that micro-organisms may play an important part in the transmission of the disease from one person to another, yet they cannot be regarded as the *sole* cause.

Dr. JOHN N. MACKENZIE, of Baltimore, then read a very interesting paper, entitled "A Contribution to the Study of Congenital Syphilis," in which he related the history of a case under his observation. In this case there was considerable ulceration of the pharynx, with resulting stenosis, and paralysis of the upper eyelids, with subsequent paralysis of the abductor muscles, as well as deafness in one ear. He described the case as one of congenital syphilis affecting the cranial nerves. He also stated that during an attack of scarlet fever the pharyngeal ulceration had healed without local treatment. In drawing his deductions from this case, he called attention to the following points: that there was no reason for believing in the existence of an ulcerative scrofulide of the throat; that while congenital syphilis afforded no protection against the occurrence of other diseases, it mitigated the course of certain acute affections accompanied by an exanthem; that the syphilitic ulceration of the throat is frequently cured by the intercurrent disease; and, finally, that these remarks do not apply to malignant epidemic influences or to syphilitic cachexia.

In the discussion which followed, Dr. E. L. SHURLEY, of Detroit, said that he considered scrofula and syphilis as two distinct but closely-related conditions, but he was not prepared to say how much difference there was between scrofulous and tubercular ulcerations.

Dr. MACKENZIE said that before the discussion went any further he would ask permission to state that he did not wish to be understood as saying that there was no difference between scrofula and syphilis, and did not mean to say that all scrofula is syphilis. But he would say that all ulceration of the throat was due to some diathesis, and that there was no distinctive point of difference between scrofulous, syphilitic, tubercular, and lupoid ulceration.

Drs. KNIGHT, DONALDSON, and BOSWORTH all expressed their opinion that there was no difference between the ulcerations of scrofula and those of syphilis, and that the treatment in these cases was that outlined by Dr. Mackenzie,—viz., mercurials, iodide of potassium, and the local use of iodoform.

Dr. HARTMAN, of Baltimore, referred to a case of syphilitic ulceration in a child, which was worse during and after an attack of measles, thus disproving to some extent the assertion of Dr. Mackenzie that these ulcerations are benefited by an intervening attack of an exanthem.

After some business was transacted, among which was the election of Drs. S. SOLIS COHEN

and C. C. RICE as Fellows, the meeting was adjourned till afternoon.

The first paper of the afternoon session was by Dr. J. O. ROE, of Rochester, on "Retro-Pharyngeal Abscess," in which he reviewed the different courses and the anatomical relation of parts, and made the point in recommending to make a small incision in the sac first, and then, after the head of the patient is well thrown forward, to evacuate the pus by enlarging the incision, thus preventing the entrance of pus into the larynx. He also reported three cases treated in this manner.

The discussion was mainly on the diagnosis and manner of opening the abscess.

Dr. T. A. DE BLOIS, of Boston, then read a paper on a case of congenital web of the vocal bands, which he had treated by rupturing the web by introducing a laryngeal forceps, closed, into the cavity of the larynx and then forcibly opening it.

Dr. HARTMAN, in the discussion, said that a procedure like that described in the paper was rather dangerous, and he would prefer to use the galvano-cautery in a case of this kind.

Dr. KNIGHT could not see the danger in a case in which the membrane uniting the vocal bands was so thin as it had been in this case, and thought, on the other hand, that the galvano-cautery knife was to be avoided.

Dr. ASH reported a case in which a web had formed after an attack of acute laryngitis.

In conclusion, Dr. DE BLOIS said that in his case neither the knife nor the galvano-cautery could have been used, on account of the great sensitiveness of the parts. Webs of this kind, although not common, are occasionally met with, and the most common causes are linear ulcers of the edges of the vocal cords and thyrotomy. Wherever practicable, the galvano-cautery is certainly the best means of dividing the adhesion, and is to be preferred to the covered knife, because reunion of the cut surfaces is not liable to take place after the galvano-cautery has been used.

Dr. WILLIAM H. DALY, of Pittsburg, then read a paper in which he reported a case of gunshot wound of the larynx, in which the vocal bands were involved. He first referred to the literature of the subject as found in the "Surgical History of the War," and in the writings of Gross and Cohen. The case was that of H. C. D., 18 years of age, who was accidentally shot with a pistol, thirty-two calibre, the ball entering the right side of the neck, traversing the larynx, and lodging immediately over the left subclavian artery, from whence it was removed. The boy recovered, and regained the power of vocalization sufficient for all purposes except the requirements of an orator or elocutionist. Dr. Daly then read several histories which had been sent to him by medical gentlemen with whom he had corresponded with reference to this class of cases.

Dr. J. SOLIS COHEN, in the discussion on

this paper, said he was astonished to find in the literature so few cases of gunshot wounds of the larynx. He also said that he had seen the boy shortly after he had been shot, and had then been in doubt as to whether the ball had entered the larynx at all: he was, therefore, astonished to hear that the ball had passed through the larynx and that it had not produced more symptoms. He also said that there were only four specimens of gunshot wounds of the larynx in the Army Medical Museum.

Dr. LEFFERTS, of New York, referred to a specimen in his collection in which the ball had entered the larynx without extensive destruction of the thyroid cartilage.

The scarcity of recorded cases in the "Surgical History of the War" may be accounted for by the fact that in warfare the missiles are much larger than the ordinary pistol-ball, and are fired with greater initial velocity, so that a shot in the region of the larynx must almost necessarily be fatal, either by entering the spinal canal, or lacerating the large vessels, or, finally, by wounding the pneumogastric nerves.

Dr. J. SOLIS COHEN then read a report of "A Case of Complete Unilateral Paralysis of all the Adductors of the Vocal Bands, the Abductors remaining Intact," caused by a suicidal incision in the neck. The author said that very little could be learned as to the extent of the external injury, as he had seen the case several months after the wound had healed. The laryngeal mirror showed the vocal cord on the affected side to be in a position of extreme abduction.

During the discussion, which hinged chiefly upon a possible explanation of the phenomenon, Dr. BOSWORTH said this was the first authentic case demonstrating the possibility of the occurrence of true adductor paralysis.

Dr. SEILER referred to the fact that a chiasm exists between the two recurrent laryngeal nerves, as had been demonstrated by experiments made by Dr. W. W. Keen and himself on the body of a criminal executed several years ago at Philadelphia, and suggested that the cause of the complete abduction of the cord was not due so much to paralysis of the muscle as possibly to ankylosis of the arytenoid cartilage in the position of abduction. The meeting then adjourned, to meet the next day.

Second Day, Morning Session.—Dr. F. H. HOOPER, of Boston, opened the session by reading a report of a case of "A Rare Form of Tumor (Cavernous Papilloma) of the Vocal Band," in which the growth, a nodular sessile tumor, was situated on the anterior portion of the left vocal cord. It was removed by avulsion without recurrence, and proved under the microscope to be a cavernous tumor, with largely-developed papillæ, resembling closely a papilloma with central

caverns. The reader of the paper thought it differed in this respect from any tumor on record. Dr. SEILER said he had had a case similar to the one reported, in which the tumor was situated about the middle of the upper surface of the right vocal cord, which was removed with the forceps, and showed under the microscope a cavernous structure.

Dr. MORRIS J. ASCH, of New York, then reported a case of "Ecchondrosis of the Larynx," in which he had removed a large cartilaginous tumor, springing apparently from the right arytenoid cartilage, by means of Stoerk's guillotine, modified for the special requirements of the case. He said that only one other case of this kind had been reported, by Dr. John Musser, of Philadelphia, who showed the post-mortem specimen at a meeting of the Philadelphia Pathological Society.

Dr. W. C. JARVIS, of New York, then read a paper on "A New Method for the Removal of Laryngeal Growths, with an Illustrative Case." This communication was largely a defence of the use of chromic acid in the removal of laryngeal papilloma. The method consisted in applying small quantities (one-sixth of a grain) at short intervals, fused upon the point of a probe. The escharotic dissolves immediately when applied to papillomatous tissues, is safe, painless, efficient, its action is confined to the neoplasm, and does not seem to affect unfavorably the normal mucous membrane. It subserves the double purpose of removing the growth and preventing its recurrence. Dr. Jarvis exhibited an ingenious instrument which he had devised for applying the salt to neoplasms of the larynx, and then gave the history of his illustrative case, in which a large growth was successfully removed in about six weeks.

The discussion on this paper was somewhat lengthy, and its drift was that most laryngologists of the present day had discarded the use of escharotics for the removal of growths from the larynx, employing mostly the forceps, and using either chemical caustics or the galvano-cautery to touch the seat of the growth after its removal, with a view to prevent recurrence. The very speedy removal of the large growth in Dr. Jarvis's case, and the ease with which the chromic acid can be applied with his instrument, will no doubt induce many who have heard the paper to try this means of removing growths from the larynx, if a favorable case presents itself to their notice.

A number of new instruments were then exhibited by several members of the Association, to describe which in detail would use too much space, and, as an account of them, together with cuts, will no doubt be published shortly by the several gentlemen, it will suffice to mention only the names. Thus, Dr. J. H. DOUGLAS, of New York, exhibited a new powder-blower, Dr. JARVIS a new laryngeal snare, Dr. MACKENZIE a new self-

retaining nasal speculum, and Dr. INGALS, of Chicago, a pair of forceps for passing the wire of the snare around naso-pharyngeal tumors. Dr. C. E. SAJOUS, of Philadelphia, showed modifications of Mathieu's Tonsillotome, of Smith's uvula scissors, and of Steel's nasal punch. Dr. D. B. DELAVAN finally showed a simple method to facilitate alimentation in cases of dysphagia from any cause.

Afternoon Session.—The subject of the new nomenclature was introduced, and referred to Council for report at the next meeting.

Dr. D. B. DELAVAN, of New York, then read a report of a case of "Permanent Unilateral Paralysis of Laryngeal Abductors following Cerebral Hemorrhage," in which the cerebral hemorrhage was followed by paralysis of the larynx and pharynx, and which symptoms disappeared, leaving only a paralysis of the abductor muscles of the larynx on the right side, which had thus far lasted for seven years.

During the discussion, Dr. KNIGHT mentioned a case of injury to the head, with alteration of the voice, in which laryngoscopic examination showed paralysis of some of the abductor muscles.

Dr. R. P. LINCOLN then read a paper on a case of "Stricture of the Esophagus," due to cancer involving the laryngeal and oesophageal branches of the pneumogastric nerves, and death by later involvement of the cardiac branches.

The discussion was chiefly a report of similar cases under the observation of the members present.

Dr. E. F. INGALS, of Chicago, then read a paper on "Tracheal Stenosis," in which he reported three cases, all of syphilitic character, and in which relief was afforded by large doses of iodide of potassium. One of the cases required two drachms four times a day before any effect was observed.

A number of cases were reported similar in nature and yielding to similar treatment, and Dr. BOSWORTH said he preferred inunctions with mercury to the large doses of iodide of potassium.

The meeting was then adjourned till Wednesday at 10 A.M.

In the evening the annual dinner took place at the University Club.

Third Day.—The session was opened by a paper by Dr. DE BLOIS on "Buccal Tuberculosis," which was a report of two cases of tubercular ulceration of the oral cavity, and the author expressed his opinion that in all cases of tubercular ulceration of the mouth or throat the lungs were involved primarily.

In the discussion, Dr. LANGMAID said that he had seen the second case, and that there was no evidence of tuberculosis in the general appearance of the patient, but, on close examination, the lungs were found to be implicated.

Dr. BOSWORTH said he thought that tuberculosis of the larynx and pharynx might occur primarily, and that in his experience the nearer the tubercular deposit occurs to the outlet the more fatal it is, and the more difficult it becomes to subdue the urgent symptoms of pain and difficulty of deglutition.

A paper on "Herpes Laryngis," by Dr. S. H. CHAPMAN, of New Haven, was then read by title; also a paper by Dr. PORTER, of St. Louis, on "Goitre."

Dr. C. E. SAJOUS, of Philadelphia, then read a paper on "Hay-Fever and its Successful Treatment," in which he advocated the cauterization of the hypersensitive portion of the nasal mucous membrane with the galvano-cautery knife. In conclusion, he said that until after he had completed this paper he had been entirely unacquainted with the labors of Dr. Roe in the same direction, as set forth in the papers which he had read before the Medical Society of the State of New York in 1883 and 1884, in which he claimed that the essential subjective cause of hay-fever was found in the nasal passages, having been induced by disease, either latent or active; that the objective cause of the irritation of this tissue was mainly pollen; that a cure could be effected by the destruction of the nerve-filaments and enlarged vessels of the part; and that the latter could most satisfactorily be accomplished by the galvano-cautery. If he could not be the first, therefore, Dr. Sajous continued, he was glad to be a good second in this matter, and he felt gratified that his conclusions had been confirmed by the more extensive experience of Dr. Roe, who had commenced his present plan of treatment as long ago as 1879, and therefore anticipated him by two years.

In the discussion which followed, Dr. SHURLEY said that he had treated several cases with gratifying results, but he had not singed the whole of the sensitive surface, confining the application of the galvano-cautery to the most sensitive spots.

Dr. ROE said he was glad to hear that his observations had been verified independently by Dr. Sajous, and he was convinced that the treatment with the galvano-cautery was the correct one. He had found, however, that the treatment should not be confined alone to the sensitive portion of the mucous membrane, but that all sources of irritation should be removed, and also that the amount of obstruction of the nasal chambers in patients not suffering from hay-fever was frequently much greater than in those thus afflicted.

Dr. MACKENZIE said that, although he did not feel sure of the pathological condition to which the disease was due, he was sure that there existed an abnormal excitability of the reflex nerve centres.

Dr. BEVERLEY ROBINSON said he had used pure carbolic acid topically in these cases with good results.

Dr. S. JOHNSTON, of Baltimore, who is himself a subject of this affection, said that in his case the attacks always come on regularly on the 28th of August. By remaining in town and avoiding dust, however, he could get along comparatively comfortably while they lasted. He always suffered intensely, however, from railroad-travel during the attack. Last summer he went away in the midst of it, feeling in pretty good condition when he left home, but when he reached Washington he suffered from a terrific paroxysm. From there he went up into the Alleghany Mountains, and as soon as he reached them all trouble instantly vanished. As long as he remained there he was perfectly free from it, but as soon as he reached Washington on his way home he was again attacked. In his own case he had derived most relief from chloroform, eucalyptol, and the insufflation of one-sixth of a grain of morphia in solution. He thought the affection was undoubtedly due to a local exciting element combined with a neurosis.

Dr. BOSWORTH said that in every case of hay-fever there were three essential elements,—a neurotic, a structural, and a sensitive; and if any one of these factors were removed the case would be cured.

Dr. SAJOUS, in closing the discussion, said that he did not mean to ignore the reflex centres, but believed that they were excited by the peculiar sensitiveness of the terminal fibres to the irritation produced by pollen-grains or other dust.

Neither the paper nor the discussion, although interesting, brought out new points either in the pathology or the treatment of the disease, for all the facts elicited have already been published by Roe, Allen, and others, and the substance of the paper was read by Sajous before the Philadelphia Laryngological Society several months ago. There is no doubt that under proper and scientific local treatment most cases of hay-fever can be cured permanently.

Dr. E. L. SHURLEY next read a paper on "The Comparative Value of the Galvano-Cautery in Diseases of the Nasal and Pharyngeal Cavities," in which he called attention—first, to the conditions necessitating the employment of the galvano-cautery; second, the comparative value of this agent; and, third, its intelligent application. Aside from the conditions which by common consent admit of the use of this agent, we should positively discover whether the nasal mucous membrane is temporarily swollen or permanently thickened. In all cases no more of the mucous membrane should be destroyed than is absolutely necessary, for cicatricial tissue does not supply the needs of nature.

Under the second head came mechanical, chemical, and electrical agents. Of the mechanical, Bosworth's modification of Jarvis' snare had served him best for the removal of

polypi, but he had been unsuccessful—probably from lack of skill—in the use of any snare for the removal of hypertrophied mucous membrane. Chemical agents failed to destroy sufficient of tissue, unless applied so frequently that they were followed by damaging reaction. The great merit of the galvano-cautery consisted in the precision with which the offending part could be touched. The mucous and submucous tissue must be completely divided.

The discussion somewhat wandered from the subject, inasmuch as Drs. JARVIS and SAJOURS discussed the use of the wire snare. Both Drs. ROSS and MACKENZIE were very much in favor of the galvano-cautery when used with care and discrimination.

Dr. BEVERLEY ROBINSON, of New York, then read a paper entitled "A Contribution to the Study of Adenoid Vegetations at the Vault of the Pharynx." He considered these growths as of infrequent occurrence. He had yet to encounter the first case in which the growths had impinged upon the orifices of the Eustachian tube and mechanically produced deafness. The writer inclined to the opinion that the ear-disease in these cases was really due to extension of inflammation to the middle ear, and took exception to the view which confounded chronic follicular pharyngitis and adenoid vegetations. In the treatment, scraping, cutting (preferably by Meyer's method), and the galvano-cautery were the means he recommended for their removal.

The discussion, which was rather lengthy, proved that most members were in favor of using the cutting-forceps for removing the adenoid vegetations, except Dr. Jarvis, who said it was dangerous to grope around in the dark behind the palate with a pair of cutting-forceps.

Dr. L. ELSBERG, of New York, read the final paper on the programme, on "Spasm of the Glottis," in which he defined laryngeal spasm to be spasmodic contraction of one or more of the laryngeal muscles, and then considered systematically the subject under the heads of classification, etiology, diagnosis, differential diagnosis, and treatment.

At the business meeting, with closed doors, the following names were presented:

President.—E. L. Shurley, M.D., of Detroit.

First Vice-President.—J. H. Hartman, M.D., of Baltimore.

Second Vice-President.—William H. Daly, M.D., of Pittsburg.

Secretary and Treasurer.—D. Bryson Delavan, M.D., of New York.

Librarian.—Thomas R. French, M.D., of Brooklyn.

Council.—Drs. Francke H. Bosworth, Morris J. Asch, and Beverley Robinson, of New York, and Dr. Frank Donaldson, of Baltimore.

After a ballot had been taken, the above were announced as the officers for the en-

suing year, after which the Association adjourned, the time and place for the next annual Congress to be decided by the Council.

C. S.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

THE first annual meeting of the American Climatological Association was held in Washington, D.C., May 3 and 5 instant.

In the absence of Prof. Loomis, the President, Dr. F. I. Knight, of Boston, First Vice-President, occupied the chair.

The first day was occupied in adopting a suitable constitution and by-laws.

The second day was devoted to the reading of papers, as follows: Address by the presiding officer, Dr. Knight; "The Etiology of Pulmonary Phthisis," by Dr. B. F. Westbrook, of Brooklyn; "The Effects of Sea-Air upon Diseases of the Respiratory Organs," by Dr. Boardman Reed, of Atlantic City; "The Relation of Laryngeal Disease to Pulmonary Diseases," by Dr. F. H. Bosworth, of New York; "Dryness," by Dr. Charles Dennison, of Denver, Colorado, (in which he dwelt on the following points: "Variability versus equability; a rule for classifying climates as to dryness and desirability, based upon low, absolute, and relative humidities and preponderance of sunshine; the influence of elevation, sunshine, cold, etc., in producing desirable dryness; the physical effect of dryness on man;") "City Life and City Air Injurious to Consumptives," by Dr. Donaldson, of Baltimore; "The Use of Compressed and Rarefied Air as a Substitute for Change of Climate in the Treatment of Pulmonary Diseases," by Dr. J. Solis Cohen, of Philadelphia.

The following officers were elected for the ensuing year:

President.—Prof. A. L. Loomis, New York.

First Vice-President.—Dr. F. I. Knight, Boston.

Second Vice-President.—Dr. W. H. Geddings, Aiken, S.C.

Secretary and Treasurer.—Dr. J. B. Walker, Philadelphia.

Council.—Dr. J. H. Tyndale, New York; Dr. E. T. Bruen, Philadelphia; Dr. E. D. Hudson, New York; Dr. Frank Donaldson, Baltimore; Dr. Beverley Robinson, New York.

CHLORAL-QUININE.—A compound of quinine with chloral hydrate has been made by Dr. Mazzara by adding the chloral to an equivalent quantity of quinine dissolved in chloroform. By evaporating the solution and redissolving the residue in ether, the new compound may be obtained in warty crystals. It is said to be volatile at 149° C., and gives fluorescent solutions with acids.—*Canadian Pharmaceutical Journal.*

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 17, 1884, HORACE T. HANKS, M.D., Vice-President, in the chair.

Dr. ROBERT ABBE read a paper on "*Dupuytren's Contraction of the Hand.*"

A better title would be "*Dupuytren's Finger Contraction.*" The author first described the anatomy of the parts concerned in the disease. It rarely occurred before the middle age of life. It was most frequent among men, the proportion given by one author being one in females to twelve in males. The deformity usually began as a little hardness or contraction at some point in the palmar fascia going towards the finger, and later stood out as a cord and caused flexion of the member. It most commonly affected the ring and little fingers. Dr. Abbe pointed out the signs which distinguished this form of contraction of the fascia from contraction of the tendons beneath.

The author narrated three cases in detail which had come under his care, and gave the principal points in the histories of several others. In the first case there had been contraction of the left little finger over seven years, and of the right ring finger over one year. For two months the band in the right palm had given rise to so severe pain that the hand could not be lifted to the head, so great was the suffering occasioned by motion.

Shortly after making subcutaneous section of the band binding down the left little finger, all pain disappeared from the right hand, although this hand had not been touched by the knife. Subsequently the bands in the right hand were also cut, and a cure of the deformity resulted. In the second case the ring and middle fingers of the right hand were involved, and the ring finger of the left. The patient had been a cutter for twenty years. Fifteen years ago he noticed contraction of left ring finger, and very soon afterwards contraction began to take place in the finger of the right hand, and he complained severely of pain in the back, for which he was long treated by Dr. Seguin and Dr. Gibney. On account of the contraction of the fingers he was referred to Dr. Abbe, who stated that this probably had to do with the pain in the back. Subcutaneous section was made upon both hands, and within a day or two there was amelioration of the pain in the back, and ten days afterwards the patient could dress himself with ease, whereas he had been unable, as he stated, to stoop to pick up something from the floor, even if it were a thousand-dollar bill. The pain never returned, and after a time there was a perfect cure of the deformity of the hands. In the third case there was double Dupuytren contraction of the fingers, which the patient attributed to injury from ball-playing. Twenty-five subcutaneous sections were made to overcome the contraction of the bands, and

the after-treatment was somewhat tedious, but the final result was perfect, except that there yet remained some contraction of one little finger. In several of the cases reported there was a swelling of the joints of the hand after the operation, which somewhat resembled a rheumatic attack, but which the author did not regard as due to rheumatism. The local benefit was no greater than that upon the general health and state of the mind. A brief account was given of about five other cases, and the author stated that in studying the cases one would notice the great prominence of nervous phenomena in all. In explanation of the disease he suggested the following propositions: First, slight traumatism, often entirely traumatic; second, spinal impression produced by this peripheral irritation; third, reflex influence to the part originally hurt, producing insensible hyperæmia, nutritive disturbance, giving rise to contractile bands of fascia, and occasionally a general disease resembling subacute rheumatism; fourth, through contraction of the bands, giving rise to a secondary series of reflex contractions, neuralgias, and general systemic disturbance.

The author quoted Weir Mitchell in proof of the statement that there was a disposition of the profession to regard many general troubles of acute or subacute form as rheumatism when they really were probably of nervous origin or due to an affection of the nervous system. That in a certain proportion of cases of any disease there would be found a rheumatic or a gouty history was undoubtedly true, and such was the case in Dupuytren's contraction of the fingers, but there was not sufficient evidence to prove that either of these two dyscrasias was the cause of the deformity of the hand under consideration.

A sufficient number of incisions should be made to overcome the deformity entirely, and if done with antiseptic precautions danger would be avoided. The hand should not be put too strongly on the stretch after the operation. The transient swelling following the operation was due to nerve-irritation, and not to rheumatism. He had not practised the method of dissecting out the fascia in V-shape, and, judging from his limited experience, Adam's method left nothing to be desired.

Dr. R. F. WEIR said he had been impressed more than once with the nervous symptoms attending Dupuytren's contraction of the fingers, and he had become pretty well converted to the theory of the nervous origin of the trouble. He believed it might be started by traumatism. He also agreed with the author regarding the value of multiple incisions, and his last remark, not to stretch the fingers immediately to full normal extension, he believed to be an important one.

Dr. A. C. POST said his attention had been directed to this subject a number of years

ago, and he believed he was the first American surgeon to call attention to it. Of late years he had not been in the habit of meeting with cases of this disease. He had been very much interested in the paper of the evening, which gave an admirable summary of the subject, and to which, it would seem, very little could be added. It was from the first a matter of surprise to him that Dupuytren's contraction of the palmar fascia of the hand should have ever been mistaken for contraction of the tendons. The cases which he had seen presented nothing which resembled the contraction of tendons. He had noticed that flexion of the wrist and elbow made no difference in the appearance of the bands of contraction within the palm, whereas, if the flexor tendons had been contracted, the approximation of the origin and insertion of the muscles would have influenced the contraction. In the cases upon which he had operated he made open section of the contracted bands. It was not a matter of great importance whether the section were made openly or subcutaneously, for there was entire safety with antiseptic methods, and the wounds had always healed kindly. He had not had any difficulty in extending the fingers which had been contracted, but he had met with the same difficulty of which Dr. Abbe spoke in restoring power of flexion after the operation. There was a considerable length of time during which the patient experienced more suffering in developing power of flexion than he had experienced from the disease. Ultimately, however, power of flexion had been restored. The cases which he had seen he believed to have been of traumatic origin. They occurred for the most part in persons whose palmar integument was thin and delicate originally, and who during some exercise, as rowing, made undue pressure upon the tender parts and excited the disease. He did not know that any of the patients whom he had seen had been afflicted with gout or rheumatism. The flexion usually involved the metacarpo-phalangeal articulation; the distal phalanx was rarely involved; the second one sometimes. He had noticed in one instance that the sheath of the flexor tendon was involved, and division of the palmar fascia did not relieve flexion; it was necessary in addition to divide the sheath of the tendon. There was more inflammation following division of the sheath of the tendon than he had known to occur after division of the palmar fascia.

Dr. FRANK H. HAMILTON said he had studied this subject at an early date, and when Dupuytren gave us his observations he tried to follow his advice, but he could not say with great satisfaction. So far as the theory which the author of the paper had propounded was concerned, it had occupied his mind for a great many years,—viz., that the malady was primarily of neurotic origin, that atrophic

changes had occurred which were due to lesions of the nervous system, and the atrophy of the palmar structure resulted in a permanent contracture of the fascia. The same thing took place in ligaments which for a period of time remained in a state of disuse. This explanation also made clear the reason why power returned so slowly to the flexor tendons after the hand had been straightened. There could be but little question that the disease was sometimes of traumatic origin, but, as it was usually confined to the ring and little fingers, he thought it must be ascribed in some cases to the almost permanently flexed position of these fingers in the occupation of the individual affected. The other fingers were more in use. Their position frequently changed, and hence an opportunity for atrophy from disuse was not permitted.

Dr. L. A. SAYRE said that with regard to the theory of the neurotic origin of the affection which had been advanced, he could give it his hearty endorsement. In all the cases which he had seen there had been pain even before the occurrence of contraction, and he believed that in all there had been a history of traumatism. The pain may have lasted for months, consisting perhaps in a tingling sensation or other altered state of the sensory nerve-filaments for months before positive pain and contraction developed. Since he had adopted Mr. Adam's plan of treatment, cutting the contracted fascia at various points, he had obtained better results. The suggestion made by Dr. Hamilton with regard to atrophy seemed to him to be a very important one, and he had observed some of the best results to take place from encouraging nutrition of the parts by massage even without division of the contracted bands. It was important after an operation to instruct the patient to manipulate the hand and thus bring nourishment to the atrophied tissues.

Dr. V. P. GIBNEY could bear abundant testimony to the painful and distressing neuroses from which many of Dr. Abbe's patients had suffered. He had seen a few cases in which he had made similar observations, and he regarded the paper as an important one in showing the connection between Dupuytren's contraction of the hand and an affection of the nervous system. He had observed that in certain forms of club-foot division of contraction bands in the fascia, after Mr. Adam's method, caused the contortion to yield more readily, with less distress to the patient, and with better final results. He had also been struck by the fact that a good many cases of joint-trouble which were called cases of rheumatism had their commencement in traumatism, and it seemed to him the basis of the permanent trouble lay in the nervous system.

Dr. A. L. RANNEY said that some years ago he made some careful dissections of the hand to determine the verity of the statement that

none of the fasciculi of the palmar fascia went to the thumb. But he found a few distinct cords running to the thumb in every instance. With regard to the proportion of cases of Dupuytren's contraction occurring in women, the author had quoted Keen to the effect that one case out of twelve occurred in women, but Dr. Ranney believed later figures, given by the same author, showed a proportion of about one to five in the different sexes. With regard to the disease having its origin in gout and rheumatism, the theory had always seemed to him doubtful, and he remembered that Dupuytren reported a case in which the disease was congenital. Dr. Ranney never knew gout to be congenital. He did not think it need always be traced to traumatism, for marked nervous irritation could be produced by attitude. No one could now question, for instance, the neurotic origin of writer's cramp, which was produced simply by attitude. It was possible that the reason for the occurrence of the disease in the little and ring fingers more frequently than in the others might be explained in more ways than that offered by Dr. Hamilton. The ulnar nerve, for instance, was more frequently injured than the median, especially at the elbow, and gentlemen were more accustomed to rest their weight upon the elbow than were ladies, which might account in part for the greater frequency of the affection in the male sex. He was not prepared to accept Dr. Abbe's statement, that a sensory impression could be sufficiently localized and be of sufficient duration to cause a hyperplastic induration leading to such contraction. He asked if it would not be more reasonable, since the contraction usually took place slowly, to suppose that there had been an impression transmitted to the nerve-centres which gave rise to the peripheral manifestations, than to suppose those manifestations were due to a localized compression of terminal nerve-filaments. As to the occurrence of the disease in both hands, we knew there was a sympathy between homologous parts, by which, if we, for instance, pinched the left ear of a rabbit, the right would immediately show diminished blood-supply. If we plunged the right hand into cold water, the temperature of the left began at once to go down. Such a relation existed between corresponding parts of the lateral segments of the cord that, when members to which the filaments of one were distributed became affected, the corresponding members sympathized by reflex irritation.

Dr. R. W. AMIDON had recently seen a case of Dupuytren's contraction in which both hands had become affected, but not simultaneously. The case was of interest to him because of certain other neurotic symptoms. The patient had had two attacks of temporary, but sudden and complete, loss of power in the legs. There was now only an exaggeration of the reflexes. There had also

been loss of sexual appetite and power for two years past. There was an atrophic condition of the left half of the tongue.

Dr. POST remarked that there was a reason why traumatism should occur upon the ulnar rather than upon the radial side of the palm, the thenar eminence directing the obstacle to the inner side.

Dr. ABBE closed the discussion, and showed some cases. He thought Dr. Post's remark concerning the reason why injury occurred on the inner oftener than on the outer side of the hand gave the probable explanation of the greater frequency of the deformity there. As to massage, it was to be preferred to stretching, but some of his cases had been so treated for years without the least benefit, and with great disappointment to the patient. This had frequently been the experience of others also.

PHILADELPHIA CLINICAL SOCIETY.

A STATED meeting of the Society was held March 28, 1884, the President, Dr. HENRY BEATES, JR., in the chair.

Dr. DANIEL LONGAKER reported a case of

SUDDEN DEATH AFTER DIPHTHERIA.

The patient, Mary F., æt. 6 years, was seen first on the afternoon of the second day of the disease. Her temperature was $104\frac{1}{2}^{\circ}$, and the general symptoms were of a decidedly adynamic type. She complained of pain and difficulty in deglutition, and a nasal tone of the voice was noticed. On inspection of the throat, congestion and swelling were evident, and a small patch of false membrane was found on the right tonsil. The local trouble continued to grow worse until the fourth day, and was associated with a diminished secretion of urine, in which albumen was found to be present. The membrane was detached on the sixth day, and by the tenth convalescence was established. On the thirteenth day she was seen for the last time. Her pulse was a little accelerated in frequency and still weak. Her appetite was good, and she was sitting up and going down-stairs. Two days later, the fifteenth of the disease, after rising in the morning and feeling quite well, she suddenly fell from the chair from which she was attempting to rise, and expired.

Dr. JOSEPH S. GIBB read a paper on

UMBILICAL HEMORRHAGE.

(See *Medical Times* for May 17, page 616.)

Dr. ALBERT H. SMITH, in opening the discussion, said: I have seen two cases of the kind referred to by the reader of the paper. The first occurred at the end of twenty-four hours after birth in a healthy child. On attention being called to it, the ligature was found loose; this was reapplied carefully. On the following morning the nurse again

discovered hemorrhage, and the child died before I could reach the house. This was not a case of neglected traumatism. The other instance occurred also in a perfectly healthy child, forty-eight hours old. The cord was ligatured by myself, but I soon found hemorrhage occurring freely from the tissue around the cord. A large compress of absorbent cotton was applied by means of Seabury & Johnson's plaster, and a teaspoonful of magnesia given internally. The child was saved. In these two cases there were no hereditary tendencies to this form of trouble; no jaundice; no purpura hæmorrhagica in either the mothers or the infants themselves. We have not so far reached any reasonable theory of its etiology. Jaundice seems a coincidence. Great stress has been laid on hæmophilia, but my experience does not bear it out. In a family under my care, four out of five died of hemorrhage, but none showed any tendency to umbilical hemorrhage. In the autopsies of fatal cases no uniform or persistent conditions have been found. My cases are somewhat remarkable, from the fact that recoveries are rare.

In the treatment we could hardly expect a compress to do much, yet I think this application the best that can be made. A laxative would contribute to lessen blood-pressure and act as a revulsive.

I would suggest that hemorrhage from non-application of a ligature would rarely occur in health, if we are to judge from the fact that in Germany they seldom tie the cord. Difficulty may certainly arise from too early ligation. My practice is not to ligature until the cut extremity has ceased bleeding. It is evident that loosening the ligature would be a dangerous experiment in some of these cases.

Dr. CHARLES K. MILLS.—I have had one very interesting case of umbilical hemorrhage, which recovered. The subject was the fourth child of perfectly healthy parents, the other three children being healthy. There was no trouble until the third day after birth, when an oozing was found at umbilicus and the child vomited blood; the cord was examined and found not bleeding at the extremity; subsequently styptics were applied without result. The hæmatemesis occurred on three occasions during the following twenty-four hours of occasional hemorrhage. The bleeding was finally controlled by transfixion with needles, and a half-drop of aromatic sulphuric acid administered every two hours. The child recovered, and is now perfectly healthy.

Dr. HANNAH T. CROASDALE.—I have had the opportunity of seeing but two cases of umbilical hemorrhage. The first was from shrinkage of the cord and great amount of gelatinous material; after the ligature was closely reapplied the bleeding began again from the cut extremity; I then applied Pean's hæmostatic forceps and left them in position twenty hours. In the other case the hemor-

rhage was controlled by tightening the ligature.

Dr. MARY WILLITS.—To the cases mentioned I would add one seen by myself in hospital. The child was a week or ten days old. After considerable hemorrhage, the bleeding was successfully checked by styptics and a compress.

Dr. HENRY BEATES, JR.—In connection with the hæmatemesis noticed by Dr. Mills, a case seen by myself showed at the autopsy gangrene of the ileum. There was also sloughing at the extremity of the cord.

Dr. JOSEPH S. GIBB.—I am grateful to the members for the relation of their experience with this troublesome affection. The relation of the hemorrhagic diathesis to it is yet a question. There seem, however, to be two things intimately connected with it: the hemorrhagic diathesis and jaundice. The case reported by Dr. Mills would rather support the former theory.

Dr. COLLINS exhibited a bullet that had been removed from the anterior nares of a man. It had remained embedded in the turbinated bones since 1865. An opening in the nasal septum remains, produced at the time of the reception of the wound.

GLEANINGS FROM EXCHANGES.

POST-NATAL DEVELOPMENT OF THE VULVA.—Dr. Robert C. Moffatt, of Brooklyn, reports two cases of rudimentary vulva at birth with subsequent development (*Proc. Hom. Med. Soc. of the State of New York*). A child two months old was presented in the following condition. The mons veneris was found to be present with extensions downwards and backwards, plainly the rudiments of the labia majora, which were lost in the smooth surface. In the region of the vestibule, just below the commissure of the labia, was a round aperture,—the urethral orifice,—the white skin extending to its border all around. A median raphé was observed extending back to the anus, but this was all. There were no nymphæ, no vulva; the hand passed readily from one thigh to the other, encountering nothing but the raphé. The parts were symmetrical. Six weeks later the labia majora were formed, and the external contour normal. The opening of the urethra had receded to the floor of the vestibule, which was now covered with mucous membrane. The opening to the vagina was only partly visible, because the posterior half of the vulva had not yet opened. The labia were in process of separating, but were held together posteriorly by a transparent, glairy membrane, which was thought to be a part of the mucous membrane. No nymphæ were discerned. The line of opening was the raphé, which still extended to the anus. Subsequently the

girl grew up, married, and had a child. There was also a second case, which was like the preceding one, except that rudimentary nymphæ were found, when first examined, at the age of five months. The manner of development in each case was the same. In both the labia majora were first formed, the growth proceeding from the clitoris backwards, the entire space from the urethra to the anus being solidly filled over. The solid parts opened successively from before backwards, finally presenting the vestibule and vagina distinctly formed.

THE RELATIONS OF THE BLADDER TO THE ABDOMINAL WALL.—The relations of the bladder to the anterior abdominal wall have been recently studied by M. E. Bouley in his dissertation (Paris, 1883), and were the subject of an animated discussion at the Société de Chirurgie with reference to an operation of suprapubic lithotomy performed by M. Després. There was much difference of opinion about the muscoli pyramidales, which are considered by Després as an important landmark in the operation, while M. Marc Sée lays great stress upon their frequent variations in size and situation. According to M. Bouley, these muscles are sometimes found wanting on one or both sides; or there may be two on one side and one or none on the other. Their size also is very variable. The second moot point is that of the relations of the prævesical cul-de-sac of the peritoneum to the upper border of the symphysis pubis. A careful dissection of thirteen bodies has led M. Bouley to the following conclusions: When the apex of the bladder is situated nine to thirteen centimetres higher than the symphysis, the height of the peritoneal fold above the same point can be found by deducting four centimetres from those numbers. When the bladder reaches five to nine centimetres above the symphysis pubis, three centimetres must be deducted. It is, however, essential to remember that the peritoneal fold stands relatively higher in fat than in thin people. M. Bouley has also repeated the experiments of Petersen, who had the idea of raising the peritoneal cul-de-sac above the symphysis by means of an india-rubber ball introduced into the rectum and distended by water; this process seems to answer well, especially in fat people. It is necessary to inject four hundred to six hundred grammes (about one pint) of water.—*London Medical Record.*

SEPARATION OF VESICATING AND DRASTIC PRINCIPLES OF CROTON OIL.—In a recent communication by Mr. R. H. Smiley, of St. Louis, to the *Weekly Medical Review*, he reports that after a series of experiments he had verified the claims of M. Serrier (*Phar. Jour., Tr.*), of the possibility of separating the drastic and vesicating principles of croton oil by means of alcohol. The oil is soluble in equal parts of alcohol, but if the alcohol be in

greater proportion, the oil separates into a soluble and an insoluble portion. The former possesses vesicating powers, the latter acts as a purgative in half-minim doses. There was no griping in any case, and no unpleasant symptom was produced except a slight nausea, which one might expect from any purgative dose of medicine. [It is to be remembered that the croton oil of commerce has several distinct sources, and that the different oils do not all react alike to alcohol. The U.S. Pharmacopœia requires that the oil shall be "soluble in about sixty parts of alcohol." European oil answers to this test, but the Indian oil is partly insoluble. The drug is also liable to adulteration with castor oil, which would be dissolved by the alcohol.]

DEATH FROM CHLORATE OF POTASSIUM.—A man, 49 years of age, by mistake took a teaspoonful of chlorate of potassium in water every two hours, until he had taken in thirty-six hours nearly two ounces. Dr. Bohn (who reported the case in the *Deutsche Med. Wochenschrift*) found him in a condition of collapse, suffering greatly from pain in the stomach, with complete suppression of urine. Subsequently, sensations of numbness of the hands and feet caused much distress and anxiety. In a period of twenty-four hours, only about half an ounce of dark-colored urine could be obtained, containing blood-corpuscles and brownish tube-casts; and the presence of methæmoglobin was shown with the spectroscope. The collapse increased, and death occurred in two days, preceded by jaundice. The spleen, liver, and kidneys were brown in color; the uriniferous tubules were filled with brownish masses. The red blood-corpuscles were changed in shape and appearance. A similar appearance after diphtheria may be due to the remedy and not the disease. Dr. Bohn condemns the delivery of chlorate of potassium into unprofessional hands, or its common sale as a harmless remedy.

DEATH FOLLOWING THE ADMINISTRATION OF POTASSIUM CHLORIDE.—During the last four or five years cases of death from the use of potassium chlorate have been of sufficiently frequent occurrence to deter any one from recommending the chlorate to be used freely as a harmless remedy, but it is only quite recently that deaths have been reported from the use of potassium chloride. Dr. Stroinski, of Chicago, kindly furnishes us with the details of the following case, which shows that poisoning by this salt may occur sometimes: "In the year 1864, while at Montjoie, Rhenish Prussia, near the Belgian border, I saw a case in which a Belgian doctor had given a prescription (in the French language) for sixteen powders, each to contain two *grains* of the chloride, the German druggist dispensing two *grammes* of the article in each powder. The muscular man died after taking

five powders (ten grammes), and the autopsy, at which I was present, proved the case to be one of poisoning by the chloride,—the man having suffered but from a slight chronic inflammation of the apex of the left lung. In the cited cases there had *not* been substituted the chlorate, but death was produced by the effects of the chloride."

ON THE IMPORTANCE OF DRAINING A SUPPURATING KIDNEY BEFORE PERFORMING NEPHRECTOMY.—Mr. R. Clement Lucas, assistant surgeon to Guy's Hospital, strongly urges this precaution before attempting nephrectomy.

It is not only that drainage relieves at once the patient, and, in many instances, is alone sufficient for cure, but that it renders a subsequent nephrectomy (when necessary) much less dangerous. Thus a double advantage is obtained. At first the patient is subjected to only a trivial operation, which is certain to give relief and may effect a cure; and secondly, should the course of events later indicate the advisability of removing the shrunken kidney, nephrectomy will have a greater chance of success. He showed in his paper that six cases were all successful in which nephrectomy followed drainage, whereas nephrectomy for pyonephrosis, with these cases abstracted, brings a mortality of fifty per cent.

It is but reasonable to anticipate some such difference in the results; for, apart from the accidents which may happen in the attempts to remove a large and adherent bag of pus, it is evident that a much greater surface must be exposed to injury in removing a distended kidney than in excising a shrunken one. Further, drainage gives time and opportunity for the patient to gain strength before being subjected to the major operation.—*British Medical Journal*.

MULTIPLE HEPATIC ABSCESSSES IN A BOY.—Before the Clinical Society of London, Dr. Samuel West related the following case: A Jewish lad, aged 11, who had never lived out of London, had a rigor on January 21, and pain in right hypochondrium. He was brought to the hospital on February 20, with evident hepatic abscess, extremely ill, and temperature of 105°. On February 23 a large abscess aspirated, thirteen ounces of greenish sweet pus removed. Four days later, free incision, seven and a half ounces of turbid purulent fluid; a second abscess discovered and aspirated, one ounce of blood-stained pus removed. On March 6 the two last swellings were again prominent, and were freely laid open, and a drainage-tube inserted. On April 9, a fresh abscess was found, explored, and then freely laid open. From this time convalescence commenced, interrupted only by a diffuse abscess in abdominal walls, which healed on being opened and washed out. Points of the case:—1. The age, eleven years. 2. The number of abscesses, three or

four, and probably more. 3. The absence of any assignable cause. 4. The great relief by evacuation. 5. The rapid fattening during convalescence.

MISCELLANY.

POPULAR SCIENTIFIC LECTURES BY PHYSICIANS.—A course of popular scientific lectures, to be delivered monthly at the Ninth Presbyterian Church of this city, was inaugurated on the 23d instant, by William R. D. Blackwood, M.D., who gave a very interesting and well-illustrated lecture on "A Cup of Tea." If physicians generally were to show more willingness to instruct the public, the result would be greater interest in the public health, measures connected with sanitary science would receive more hearty endorsement by the people, and the medical profession would be more highly esteemed.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK held its seventy-seventh annual commencement on May 13, when one hundred and five candidates for the degree of M.D. were graduated. Addresses were delivered by the Rev. Howard Crosby, D.D., President Barnard, of Columbia College, and Prof. John C. Dalton.

The Alumni Association Prize of five hundred dollars was awarded to Dr. Moses Allen Starr for the best essay on any subject in medicine or surgery showing original research.

THE MASSACHUSETTS MEDICAL SOCIETY will hold its one hundred and third annual session at Boston, in Huntingdon Hall of the Institute of Technology. The anniversary exercises will commence on Tuesday, June 10, and the annual meeting will be held on the following day. The annual discourse will be delivered by Dr. John Crowell, of Haverhill.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will hold its twelfth annual session at St. Louis, Mo., on October 14 to 17, inclusive.

PROF. J. M. DA COSTA was elected President of the Philadelphia College of Physicians at its May meeting.

NOTES AND QUERIES.

COLLECTIVE INVESTIGATION.

THE medical profession, as a rule, is desirous of advancing medical science in order that humanity may be benefited. It is believed that much can be accomplished in this direction by collective investigation. There are many questions arising which a general expression of opinion from practising physicians would greatly aid in elucidating; although the contribution from each would be small, the aggregate would command attention. Therefore, when circulars asking for information as to personal information are received from reputable societies or members of the profession, both courtesy and professional spirit would require attention to them, as their end will only be accomplished with the aid of a large number of experienced observers. The receipt of such an

inquiry is a compliment, and a prompt reply should be considered a duty.

Information upon the following topics is desired by Dr. T. D. Crothers, Secretary of Committee, American Association for the Care of Inebriates, to whom answers should be addressed:

1. Can you give any history of inebriates whose drinking dated from or was influenced by head injuries, sunstroke, syphilis; or could be traced to mental shock, disease or injury of any kind; also to overwork, nervous exhaustion, anæmia, and any specific causes which broke down or injured the system?

2. Can you give any facts from observation, bearing on the heredity of inebriety; particularly as to the presence of insanity, epilepsy, phthisis, inebriety, or other neuroses in the parents or relatives of inebriates?

Give cases with histories if possible.

3. Have you seen any cases in which insanity or epilepsy either preceded or followed inebriety? If so, was it traced to the use of alcohol alone, or was it due in part, or in whole, to some inherited or acquired diathesis?

4. Have you noted any distinction between the different forms of inebriety, such as irregular, continuous, or periodical inebriety? State any facts you have noticed which relate to the periods and forms of drinking.

5. What particular mental and physical changes have you noticed concerning the character and general health of the inebriate, that would suggest the idea of disease and the need of physical care and treatment?

6. Have you noticed any form or condition of inebriety that seems to be produced or is largely influenced by the kind of alcoholic drink used, or the work engaged in, or the food or climate, or any other unsanitary surroundings?

Illustrative cases concerning any of these inquiries will be welcome, and a full expression of opinion from observation and experience is urgently requested.

DR. THOMAS F. WOOD, editor of the *North Carolina Medical Journal*, has instituted an inquiry into the effects of tobacco upon the human system, and has issued the following in order to arrive at the actual facts in regard to the effects:

1. What harmful effects have you noticed to follow the prolonged addiction to tobacco?

(a) As regards the nervous system?

(b) The digestive system?

(c) The circulatory system?

(d) The sexual system?

(e) The visual and auditory apparatus?

2. What beneficial results have you observed to follow the use of tobacco?

3. Have you observed any effects upon lying-in women due to snuff addiction?

Is persistent anæmia more common among women thus addicted?

Is menstruation impaired by it?

Are patients addicted to tobacco in any form less susceptible to drugs, such as quinine?

The above questions are stated as points which may suggest more important lines of thought. It is desirable to get a reply as early as possible, and as soon as the reports are all in and arranged, a printed copy will be sent to each reporter.

As we believe that the toxic effects of drugs may be much modified by combination, we would like to have the experience of some of our readers upon the combined effects of alcohol and tobacco, as it should not be forgotten that indulgence in one is very apt to be associated with a taste for the other.

BOYLSTON MEDICAL PRIZE QUESTIONS.

Questions proposed for 1885:

I. Alleged Recent Reappearance of Intermittent Fever in New England. Its History, and the Pathology of the Disease. Prize \$250.

II. The Best Preliminary Education for the Study of Medicine. Prize \$200.

Questions proposed for 1886:

I. Influence of the Soil as a Factor in the Causation and Spread of Typhoid Fever. Prize \$350.

II. The Relation of Hospitals to Medical Education. Prize \$200.

Essays to be sent before the first Wednesday in April of each year. For further particulars address

WILLIAM F. WHITNEY, M.D.,

Secretary Boylston Prize Committee.

HARVARD MEDICAL SCHOOL,
BOSTON, MASSACHUSETTS.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 11, 1884, TO MAY 24, 1884.

WALTERS, WILLIAM E., MAJOR AND SURGEON.—Ordered to report for temporary duty to the commanding officer at Plattsburg Barracks, New York. Paragraph 4, S. O. 90, Headquarters Department of the East, May 10, 1884.

HUBBARD, VAN BUREN, MAJOR AND SURGEON.—Relieved from further duty at Fort Stanton, New Mexico, and ordered to Fort Bayard, New Mexico, for duty. Paragraph 3, S. O. 96, Headquarters Department of Missouri, May 12, 1884.

MOSELEY, E. B., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty at Vancouver Barracks, Washington Territory. Paragraph 6, S. O. 59, Headquarters Department of Columbia, May 8, 1884.

WILCOX, TIMOTHY E., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Washington Barracks, D.C. Paragraph 2, S. O. 90, Headquarters Department of the East, May 10, 1884.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered to proceed to Fort Canby, Washington Territory, for temporary duty at that post, relieving Assistant-Surgeon W. O. Owen, Jr., U.S.A., who will report in person at these Headquarters for further orders. Paragraph 5, S. O. 62, Headquarters Department of Columbia, May 12, 1884.

WALES, P. G., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Old Fort Colville, Washington Territory, until further orders. Paragraph 3, S. O. 58, Headquarters Department of Columbia, May 7, 1884.

STERNBERG, GEORGE M., MAJOR AND SURGEON.—Relieved from duty in Department of the East, and ordered to report to the Surgeon-General of the Army for temporary duty. Paragraph 2, S. O. 115, A. G. O., May 17, 1884.

MAGRUDER, DAVID L., LIEUTENANT-COLONEL AND SURGEON.—Ordered to be relieved from duty as Medical Director Department of the Missouri, and to proceed to Philadelphia, Pennsylvania, and assume duties of attending surgeon and examiner of recruits in that city.

FRYER, BLENCOWE E., MAJOR AND SURGEON.—From Department of Missouri to Department of Dakota.

EWEN, CLARENCE, CAPTAIN AND ASSISTANT-SURGEON.—From Department of Missouri to Department of the Platte.

STRONG, NORTON, FIRST LIEUTENANT AND ASSISTANT-SURGEON.—From Department of the Platte to Department of Missouri.

Paragraph 7, S. O. 115, A. G. O., May 17, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM MAY 11, 1884, TO MAY 24, 1884.

Medical Inspector D. KINDLEBERGER, to be Fleet-Surgeon of Pacific Station.

Assistant-Surgeon PHILIP LEACH, detached from U.S. steam-ship "New Hampshire," and ordered to Naval Hospital, Chelsea.

P. A. Surgeon D. N. BERTOLETTE, detached from Naval Academy, and ordered to practice-ship "Dale."

Assistant-Surgeon W. MARTIN, ordered to U.S. steam-ship "Constellation."

Medical Inspector H. C. NELSON, granted leave of absence for one year.

P. A. Surgeon L. B. BALDWIN, detached from U.S. steam-ship "Pensacola," and waiting orders.

Surgeon H. M. WELLS, ordered to Naval Hospital, Brooklyn.

P. A. Surgeon J. M. MURRAY, detached from U.S. steam-ship "Minnesota," and ordered to U.S. steam-ship "Passaic."

P. A. Surgeon J. R. WAYGENER, ordered to U.S. steam-ship "Hartford."

PHILADELPHIA, JUNE 14, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TUMORS OF THE FOOT AND HAND, AND OF THE SYNOVIAL SHEATHS; WITH REMARKS ON ETHER-ANÆSTHESIA AND ITS PRODUCTION BY THE RECTUM.

Delivered April 16, 1884,

BY ROBERT F. WEIR, M.D.,

Surgeon to the New York Hospital, Professor of Clinical Surgery in the College of Physicians and Surgeons, New York.

(Reported for THE MEDICAL TIMES.)

YOU will remember, gentlemen, that last week we removed a tumor the size of a chestnut, which I told you was rather rare for the locality in which it had developed,—namely, in the sole of the foot. This has been examined microscopically and has been found to be pure fibroma.

The little patient before us illustrates the old adage, which applies in surgery as well as in the other affairs of life, that troubles never come singly, or, as we say at the hospital, rare diseases come in pairs. I have to-day another tumor to present to you; not, however, of the sole of the foot, but of the palm of the hand. There are several varieties of tumors which may show a special disposition to develop in these situations, and particularly upon the hands. Sebaceous tumors are rare, for anatomical reasons; but fatty, fibrous, or sarcomatous tumors are more common. Not infrequently cartilaginous tumors form about the joints of the fingers. Several years ago I had occasion to amputate the ring-finger of a distinguished practitioner for a sarcoma of the proximal phalanx: no recurrence has yet taken place. Eight years ago I removed also a spindle-celled sarcoma from the thumb of a violinist, without recurrence to the present time. In fact, I may here state that this case, and two others of spindle-celled sarcomata located adjacent to or in the aponeurotic structure, confirm the favorable prognosis given in such cases by Virchow. Tumors of these varieties are alluded to more or less fully by surgeons, but they lay little stress upon a certain form of neoplasm which may develop at the wrist or ankle,

or along the sheath of the tendons of the hand or foot. I refer to sarcoma, a disease which hitherto has been very seldom found developed in the sheath of tendons. Four such cases have been recently collected by Dr. Markoe, two of which I saw with him at the New York Hospital, and an additional one has recently come to my knowledge. Some of you have seen the latter case at the college clinic, it being one of tumor developing upon the dorsum of the hand in a young Italian girl. It looked to the general view like an ordinary compound ganglion (meaning by ganglion a secretion of fluid underneath the sheath of the tendons, which we so frequently find just below the wrist, making a projection there which we often disperse by a sharp blow with a heavy book, rupturing it subcutaneously). This tumor involved the sheath of the tendons, and, instead of having, on being opened, the honey-like fluid containing rice-like bodies or fibrous masses due to inflammatory action, there was a pultaceous, semi-organized substance, which under the microscope presented all the elements of a spindle-celled sarcoma, exactly as did all the cases reported by Dr. Markoe; and, to complete the history, recurrence has lately taken place.

You will notice that in this little girl, from whom we removed the tumor of the foot last week, there has been no inflammatory reaction whatever. The wound was not closed, but dressed with an iodoform compress, and it has done perfectly well since. It requires a little time to heal up from the bottom. It is even more important in operative wounds of this kind upon the sole of the foot than in similar wounds upon the palm of the hand to dress them openly, for the patient is liable at any time to step upon the foot or strike it against something and set up an inflammatory action which may lead to that dread disease, tetanus.

In operating upon this little boy for the removal of the tumor on the hand, I propose to employ a novelty in surgery in connection with the use of ether as an anæsthetic.

You know that in this country we commonly give ether by a cone, usually improvised out of a towel which is stiffened by paper inserted within its folds. The paper also serves to prevent the too rapid evap-

oration of the ether. Some make the cone open at the distal end, to admit of the freer entrance of air and to effect evaporation of the anæsthetic more rapidly, but that is not necessary, for a sufficient degree of air will gain entrance around the cone where it is applied over the face, or through the various openings in your cone. The ether-inhaler of Allis, which I show you, is intended to take the place of a cone, and by its numerous folds of bandage gives a large evaporating surface, and, as a rule, acts quickly.

It is only comparatively recently that ether is beginning to take the place of chloroform in foreign countries, and particularly so in England. Dr. Jeffries, of Boston, went over to that country five or six years ago, and demonstrated to English surgeons the comparative safety of ether and the ease with which it could be administered, and since then this anæsthetic has come into fair use in that country. But they were struck with the very lavish manner in which American surgeons used the ether, pouring and washing it in a prodigal way on the cone, and they, being of a more economical turn of mind, set about devising means by which it could be economized. In America we do not think of going out to perform an operation requiring an anæsthetic without taking at least half a pound of ether with us, and often a pound.

Among the apparatus devised by the English, here is one by Ormsby, by which the quantity of ether necessary to anæsthetize the patient and do an operation is reduced to one or two ounces. By this apparatus the escape or evaporation of the ether is prevented by a rubber bag attached to a metallic mouth-piece, and its anæsthetic influence is enhanced by compelling the patient to breathe over again the carbonic acid coming from the lungs. This method, however, causes a greater amount of lividity and asphyxia than that which allows the patient a greater amount of fresh air. The lividity is sometimes so great that it has caused me anxiety lest serious trouble might take place; but no accident has been known to result from it when given in this way.

Such an apparatus has an additional minor advantage in preventing the escape of ether-vapor into the operating-room, and also saves the surgeon the discomfort which is sometimes experienced from

breathing atmosphere containing ether. One of my colleagues states that he always has a sick headache from the ether used at his operations.

Here is another ether-inhaler, known as Clover's, a modification of Ormsby's in some little particulars, and yet those slight modifications make the apparatus much superior in value. It is supplied with a simple contrivance which easily regulates the supply of fresh air, and so saves the necessity of removing the entire apparatus from the patient's face.

Last spring, M. Mollière, a distinguished surgeon of Lyons, France, whom many of you probably know of through his admirable work on diseases of the rectum, was walking through his wards, accompanied by a gentleman from Copenhagen, who, learning that ether was used as an anæsthetic, inquired of him how he gave it, whether by the mouth or by the rectum. Dr. Mollière was quite astonished at the question, but was told that in Copenhagen they were in the habit of giving ether by the rectum. This was novel to him, and he immediately set to work to institute trials of the method of administration, and he has lately, in the *Lyon Médical* of last month, published a number of cases in which the anæsthetic was successfully resorted to in this way. He put some ether into a bottle, which was connected with a tube leading into the rectum, and, putting the bottle into hot water, say of a temperature of 130° F., evaporation began to take place rapidly, and the vapor passed through the tube up into the intestine, and, there being absorbed, produced its anæsthetic effects. In some cases he used it only to keep up the anæsthetic state first produced by the cone, while in others this method alone was made use of to produce insensibility. The time required to put the patient under the influence of the ether administered in this manner varied from four to twelve minutes.

Now, you may think that this is only amusing, and not of practical use. But it is of practical use, and I may be able to demonstrate its value upon a patient to-day who has hare-lip. It has special advantages in connection with operations upon the face. In such cases we have, by the usual method, to put on the ether cone, get the patient under the influence of the agent, and then remove the cone and pro-

ceed quickly with the operation, and perhaps in the middle of it the patient will partially come from under the influence of the anæsthetic, necessitating the reapplication of the cone and the temporary suspension of the operation. To avoid this inconvenience, we sometimes even perform preliminary tracheotomy, and administer the ether through a prolongation of the tracheotomy-tube. Now, if ether can be administered efficiently by the rectum, of course it will obviate these inconveniences arising from its administration by the mouth and nose. Mollière claims the further advantages for the rectal administration of ether that it does not bring about what is called the muscular stage, nor is it followed by vomiting. He has only given a few instances of its use in this manner, and it has been so administered but once in this city; that was day before yesterday, by Dr. Bull, at the New York Hospital. In that case etherization was commenced by the rectum, and, after it had advanced to a certain stage, complete anæsthesia was effected by a few breaths through the cone. This was also the experience of Mollière in two of his cases. When administered by the rectum, one or two ounces, and sometimes less, will prove sufficient to bring on anæsthesia.

There is one objection to the method, which one might foresee, and that is that the introduction of the tube, even without the ether-vapor, which is more or less irritating, will sometimes cause the act of defecation. In Dr. Bull's case, although the bowel had been moved by an injection, the tube caused a passage and temporarily interrupted the operation. Mollière says defecation does not occur in every case; but, even if it did so, it would be but a slight objection compared with the great advantage it would be to have, as just stated, such a means of producing insensibility in cases demanding the removal, for instance, of the lower jaw, or a plastic operation about the mouth.

In this connection, the theoretical question has suggested itself to my mind whether ether might not be administered in sufficient quantity by the mouth to be absorbed by the stomach to produce insensibility. If it were to cause too much irritation if taken in the concentrated form, perhaps it might be effectually taken diluted; or might it not be administered hypodermically? These questions, of

course, are only speculative. I do not know that the idea has ever been put to practical demonstration. In fact, a second thought tells me that the hypodermic use is stimulant in its effect, though, so far as I know, only small quantities have been so used, and without local irritation.

While this boy is now being put under the influence of ether according to this method, it may not be uninteresting to you to know something further with regard to the comparative safety of ether and chloroform. When you go out into practice, you will meet with physicians who will tell you they believe chloroform to be perfectly safe, for they have always made use of it in operations and have never met with a single mishap. But remember it is the large collection of figures that tells the story; it is the observation of hundreds and thousands of cases in hospital practice which enables us to decide as to the comparative safety of these two agents employed for anæsthesia. Chloroform has been found, in a large collection of cases, to give one fatal result in about every twenty-five hundred cases in which it is administered, whereas ether has produced death only about once out of twenty-five thousand times of its administration. This percentage is so small that we feel justified in telling our patients that it is practically a perfectly safe agent.

Then, respecting the administration of ether to patients suffering from certain chest diseases. There are some forms of disease within the thoracic cavity, as in cases in which the left pleura is filled with fluid and the heart is crowded out of its normal place, in which obviously it would be very dangerous to give anything which quickens or alters the rhythm of the respiration or heart-action. But, in all ordinary cases of phthisis and heart-disease where an operation of any severity is demanded, we feel quite safe in the administration of ether. You may find that persons suffering from phthisis, or from cardiac disease, and also those who are perfectly healthy, will sometimes show signs of slight bronchitis twenty-four or forty-eight hours after the administration of ether, the cough being apparently due to the irritating effect of the ether upon the bronchial tract, or to the congestion which occasionally attends an incautious anæsthesia.

For you know that during the administration of ether, when the patient becomes profoundly anæsthetized, the tongue is liable to fall back and occlude the entrance to the larynx. In the New York Hospital, the person who administers the ether is usually provided with a small pair of forceps, permanently attached to the operating-table by a long, slender chain, with which to seize the tongue under such circumstances and draw it forward. Es-march's forceps are the best for this purpose, as they are strong and lozenge-shaped at the end, in order to force open the jaws. But you will not always be able to seize the tongue, and then you may resort to the expedient, which we borrow from the Germans, of putting the finger behind the angle of the jaw and throwing the chin forward, thus putting the genio-hyoid muscles on the stretch and lifting the tongue. Again, we sometimes accomplish the purpose by throwing the head extremely backward. But sometimes, in spite of all precautions, such a degree of congestion will ensue as to give rise to a bronchitis which may continue for several days.

There is another precaution which you should always take when about to administer ether, and that is to see that the patient has no removable false teeth within the mouth, for they are liable to become loosened during the patient's insensibility and either be swallowed or, worse still, enter the air-passages. You may find occasionally some old maid, more sensitive than wise, who will deny having false teeth, and during the operation perhaps risk her life by a tooth going into the larynx. So always satisfy yourself on this point by either inquiring beforehand or by personal inspection in the early stage of the etherization.

Another point, with which most of you are probably acquainted, is one to which attention was called by Dr. Packard, of Philadelphia. I refer to the early or primary anæsthesia produced by ether, and, with less regularity, by chloroform. After the patient has taken a few inspirations of the anæsthetic, with the hand voluntarily uplifted, there is a momentary stage when the hand drops, at which sensibility disappears. This stage lasts only long enough to admit of opening an abscess, setting a fracture, or reducing a simple dislocation, —a short time, say not more than one or

two minutes,—and, if you do not take advantage of it immediately, you will have to continue the anæsthetic until its full effect is produced. We all hope to live to see insensibility to pain produced without loss of consciousness. Occasionally we encounter such instances under our present anæsthetics. I was once about to perform an operation upon a physician, who told me that he would make a certain motion when this stage was reached under nitrous oxide, and that I should then cut. He made the motion, but I did not cut. He then made the motion again, much more vigorously, and I cut, making quite an extensive incision. He told me afterwards that it caused no pain whatever.

I will not attempt to discuss the different kinds of anæsthetics which have been recommended for use in surgery, but will merely mention the dichloride of ethylene, the bichloride of methylene, and the bromide of ethyl. All of these agents have been found to be dangerous. I was captivated by the bromide of ethyl at first, and performed several important operations while the patients were under its influence. But some symptoms appeared which excited my fears, and I quit its use. And, finally, a death taking place on the operating-table of Dr. Levis, who introduced the agent as an anæsthetic, shook the confidence of the profession and caused its disuse.

Let us return to our young lad with the tumor of the hand. He comes very slowly under the influence of the ether administered by the rectum. He has now taken it without any discomfort or abdominal tension for ten minutes. He is drowsy and breathing heavily, yet is not insensible enough to bear an incision. It is probable that this is due in part to the fact that the ether which the druggist gave our messenger was the ordinary commercial ether, and not Squibb's, which I generally use. I have sent for some of the latter, and you notice at once how freely the ebullition occurs,—much more rapidly than from the ether first used. We find that it has a more rapid and marked influence: the breathing is becoming more stertorous.

[At the end of ten minutes following the use of Squibb's ether, during which its administration was interrupted by the patient's strong desire to defecate, the administration of the ether by the rectum

was abandoned, and anæsthesia completed rapidly by the use of the ordinary cone, and the tumor rapidly removed from the palm at the base of the right index finger. Rectal anæsthesia would have probably succeeded, but Dr. Weir was anxious to perform a hare-lip operation under its use before the expiration of the clinic hour.]

CASE II.—HARE-LIP.

The effect of the pure ether administered by the rectum in the case of this little child, aged eight months, upon whom we are operating for simple hare-lip, is all that could be desired. I was able to proceed with the operation within three minutes after beginning etherization. The little one has defecated, but that has not interrupted the administration of the vapor. There has been no muscular stage in either of the two patients during rectal administration. The boy struggled some, however, when the cone was applied.

It was noticed in each of the cases that by increasing the temperature of the water to too high a degree, evaporation of the ether takes place faster than it can be absorbed by the rectal mucous membrane, and gives rise to intestinal distention. This was easily obviated by allowing the surplus vapor to escape from the pinched anus, and also by lifting the bottle containing the ether from the basin of hot water in which it rested. [It has since been stated that this patient died the next day, with signs of congestion of the bowels, and bloody discharges.]

Ed.

ORIGINAL COMMUNICATIONS.

THE TREATMENT OF DIPHTHERIA BY ALCOHOL.

BY S. J. RADCLIFFE, M.D.,

Washington, D.C.

A CONTRIBUTION to the therapeutics of diphtheria is perhaps always admissible. A few words, therefore, on its treatment by alcohol, with an appended typical case, may need no apology. It is a subject of absorbing interest at all times, and if any course of treatment can be pointed out that will tend to limit its force or lessen its mortality, it ought to be well received and rightly appreciated. It is not claimed that there is anything new in the employment of alcoholic stimulants in

such cases, but the point which it is especially desirable to notice is that they should be given in full doses and without stint, as it will be found that they produce, in this condition, no stupefaction and no injurious effect on the cerebro-spinal system, even in little children.

I have no doubt of the value of this agent, and while there are so many and diversified lines of treatment employed to combat this fearful malady, most of them entirely empirical, and some, no doubt, decidedly irrational and based on no certain grounds, it is well to keep this one in view, for the purpose of having something to fall back on in case of doubt, failure, or disappointment in other therapeutic means.

There cannot be the shadow of a doubt that many cases succumb in spite of all treatment by reason of the rapid deterioration of the general system from blood-poison, and the failure of the heart and nervous centres in maintaining a proper equilibrium, by keeping up the circulation in order to furnish adequate nutrition to the body at large. It must be admitted that the first three or four days generally decide its termination, either favorable or fatal, either for better or worse. If these are passed with appreciable change for the better, or remain at least in a passive condition, and we feel we have the disease well in hand, all goes on well; if not, if we are conscious that everything is uncertain, that every hour brings a worse phase of the trouble, and treatment is continued only at hap-hazard and without the least efficiency whatever, we may be sure there can be but one termination, and that is—death.

It is my opinion, therefore, that alcohol must play an important part in the treatment of diphtheria and scarlet fever, as it has always in that of all adynamic and zymotic diseases. The report of almost all successfully-treated cases of diphtheria has plainly shown that to this agent were due mainly, or in a prominent degree, the favorable results obtained. Whether we view its operation on the economy simply as a cardiac stimulant or tonic, or as a germ-destroyer or disinfectant, as is maintained, it may be considered an all-sufficient combatant, and we can afford to ignore even other physiological actions of this agent, most of which are unknown and rest still in a mist of uncertainty, and be

satisfied that such action is adequate to meet the demands and produce the result most desirable in each case.

If, as has been confidently asserted, a part of the alcohol taken internally is broken up and deposited in the tissues as a hydro-carbon for use in the economy, and a part eliminated by the kidneys as alcohol, a part also being exhaled by the lungs, a certain portion only being available in the system, it is evident it must have been absorbed into the circulation to do so; and, as the systemic circulation contains *de facto* the materies morbi of the disease,—whether in the serum as distinct organisms or bacterial formations, or in combination with the plastic material of the blood or corpuscles,—why may it not be a rational sequence that alcohol acts first locally, as a germicide and disinfectant, both on the fluids and on the exhalations from the lungs; second, as a cardiac tonic, in an indirect way, through the nervous centres; and third, as a food, supplying pabulum for exhausted energies, maintaining the tissues in a healthy state, or preventing disintegration or waste, or harboring of stored-up resources? Flint says the production of animal heat, which is supposed by some to be due entirely to the action of non-nitrogenized substances (hydrocarbons), is closely connected with the function of nutrition.

Dr. Sternberg says, in his article on the "Germicide Value of Therapeutic Agents," in the *American Journal of the Medical Sciences* for April, 1883, p. 321 et seq., under the head of "Alcohol," "The value of alcohol as a germicide is so slight that its favorable action in supposed germ-diseases requires some other explanation than that which assumes that it may destroy parasitic micro-organisms in the circulation." But, he continues, "it is, of course, quite possible that other pathogenic organisms are more susceptible to the influence of this and of other reagents than are the test-organisms which have been selected for these experiments. This is, indeed, rendered probable by the very marked difference shown in the vital resistance of *Bacterium termo* and of the septic micrococcus to the reagent in question.

"The first-named organism in a fresh culture was not killed by immersion in ninety-five per cent. alcohol for two hours; and the vitality of the same organism in

'broken-down' beef-tea, old stock, containing reproductive spores, was preserved after forty-eight hours' immersion in ninety-five per cent. alcohol, while the septic micrococcus was not able to resist the same agent in the proportion of twenty-four per cent."

The organisms selected for his experiments were—*a*, a micrococcus from gonorrhœal pus; *b*, a micrococcus from pus obtained from an acute abscess-whitlow; *c*, a pathogenic micrococcus from the blood of a septicæmic rabbit; *d*, *Bacterium termo* and other bacterial organisms—micrococci and bacilli—from "broken-down" beef-tea which had been freely exposed to the air.

There is, of course, a vast difference between an artificially-selected and productive organism and one developed in the way nature points out, and these artificially-selected organisms cannot be compared with, and must not be confounded with, the particular organisms peculiar to, and a part of, all "germ diseases," such as diphtheria.

It is, therefore, very well for Dr. Sternberg to put in by way of parenthesis, showing how candid and free from bias he is to any particular theory, that its favorable action in supposed germ-diseases in destroying parasitic micro-organisms in the circulation requires some other explanation than its assumed value, and that it is, of course, quite possible that other pathogenic organisms are more susceptible to the influence of this reagent than the test-organisms selected for experiment. What are these other pathogenic organisms more susceptible to the influence of this reagent? That is exactly the question at issue: What are they? Until we decide the "What are they?"—the diphtheritic bacilli, if you choose,—we cannot pretend that the value of alcohol as a germicide is so slight that its favorable action requires some other explanation than that which assumes that it destroys parasitic micro-organisms by its mere contact within the body or in the circulation. No doubt there are certain conditions of the body, either physiological, chemical, or mechanical, local or general, as yet not described or not within our knowledge or comprehension, which, however near we may come to them by experimental research, will ever still be beyond our grasp, and however well our approaches may be conducted towards them, we will

still find that the object we search after is a little beyond. We cannot penetrate the unknown, and no laboratory arrangements of ours can compete with those set up by nature. We can only judge by results in many, I might say most, of the operations we employ having in view the cure or mitigation of disease. Experience, really, is our guide, and this is gained by empiricism. Chemical affinities, solutions and solids, agents and reagents, analysis and synthesis, we are acquainted with out of the body, but when we come to apply these principles and actions to the vital parts within the body, we find there is but little similitude, and we wonder why, and forget that the two are manipulated by different hands. This is the reason we are so often disappointed in our work and are so apt to attribute our successes or our failures to the wrong source. We often lay claim to and solace ourselves with the idea that we have accomplished a great thing, when, probed a little deeper, the great achievement proves to be a mere fallacy.

Prof. Dujardin-Beaumetz, on the treatment of pneumonia (*Boston Medical and Surgical Journal*, vol. cvii. pp. 481-2), says, "For quite a number of years I have been engaged with some perseverance in the study of the action of alcohol on the economy, and, although I have not yet attained a complete solution of this physiological problem, I believe, nevertheless, that we are warranted to-day in affirming that alcohol acts in three ways,—as a food, as a medicine restoring waste, and as a tonic. Let us examine each of these properties. Alcohol acts as a food. Here is one of the points the most disputed in the physiological action of this substance. You are well aware that there are two decisive opinions as to this action: one party maintains that the larger part of the alcohol ingested is burned in the economy; this is the opinion defended by Liebig, Bouchardat, and Sandras. The other party, represented by Perrin, Lallemand, and Duroy, claims, on the contrary, that alcohol undergoes no modification in our tissues.

"In support of each of these opinions chemical arguments have been adduced, and physiological arguments. I have no room in this lecture on pneumonia to enumerate them in their entirety, but what I can affirm, and that because I have studied the subject under all three of the

aspects, is that it is impossible to furnish a direct experimental solution of the problem.

"We, indeed, find alcohol unchanged in the tissues and in the excretions. The analysis which we recently made in our hospital service of the viscera of a man who, after killing his two sons, committed suicide by swallowing a quart of raw brandy, revealed the presence of the brandy in notable proportion in the brain, spinal cord, kidneys, liver, and lungs. But the quantity which we found, did it equal that which had been ingested? Here lies the whole question.

"To-day, thanks to the experiments of my excellent *interne* in pharmacy, Jaillet, we are in a position to affirm that alcohol does undergo transformation in the economy. Jaillet has, in fact, demonstrated that in presence of hæmoglobin and oxygen, alcohol is transformed into aldehyde, then into acetic acid. This reaction which takes place in the apparatus of our laboratory ought also to take place when alcohol is introduced into the economy and passes into the blood. Alcohol is then a food, and we can qualify this statement by saying that it acts as food by giving force and restraining waste. In order to undergo its successive transformations in the system, alcohol takes its oxygen from the blood, and, in particular, from the oxy-hæmoglobin, and, if the dose is too large, it stops hæmatisation, and the individual dies asphyxiated. In fine, alcohol acts unchanged upon the cerebro-spinal centres and determines these phenomena of excitation and tonic; and it is in this way that we explain its tonic and stimulant action. From these conclusions it is easily understood how alcohol comes to be of service in the treatment of pneumonia. It supports the vital forces, braces up the tissues, and, instead of augmenting the temperature, lowers it."

The *London Medical Times and Gazette* (vol. i., 1878, p. 147) says, "Prof. Binz, with the assistance of Herrn H. Henbach and A. Schmidt (*Archiv f. Exper. Pathologie*, vi. 287), has lately re-examined this question, 'The Excretion of Alcohol by the Kidneys and Lungs,' using Geissler's vaporimeter for the detection of small quantities of alcohol in the urine, instead of the ordinary chromic acid and iodine reaction, and the same method for the pulmonary vapor, the latter being previously

condensed by passing the breath through a series of Wolff's bottles containing cold distilled water, or through a Liebig's condenser. With the vaporimeter as little as 0.05 per cent. of alcohol could be detected, though certain precautions, fully described in the original, are necessary for its accurate use. Admitting all possible errors, experiments on the urine of six patients with various febrile affections (erysipelas, pneumonia, phthisis, etc.) showed that during a period of eight or nine hours after a dose of alcohol had been taken, not more than 3.1 per cent., or, at the highest computation, 6 per cent., escaped by the kidneys, while in some determinations no alcohol at all could be discovered in the urine. In regard to excretion by the lungs, it was found if from thirty to sixty cubic centimetres of pure alcohol were drunk, diluted with syrup, and the patient's breath were condensed continuously for one or two hours, and the product examined either immediately after the ingestion of the alcohol or at any time within six hours, not a trace of the alcohol could be found in it. Even assuming that the alcohol ingested required fifteen hours for the whole of it to evaporate by the lungs, the vaporimeter method was delicate enough to detect the fraction of it which would have escaped during the progress of the experiment. The idea that alcohol is present in the breath after wine or spirits have been drunk, depends on the odor imparted by the presence of various ethers, fusel oil, etc., and not alcohol. A quantity of pure, diluted alcohol equal in volume to half a bottle of champagne may be drunk without tainting the breath in the least; and alcohol may be subcutaneously injected with the same result, though it is immediately detected if a little fusel oil be added to it first. Reasoning from analogy, Prof. Binz and his assistants regard it as impossible that the skin should eliminate alcohol, if the lungs, which are so much better constructed for excreting it, do not do so.

"They conclude, therefore, that by far the larger part of any ingested alcohol is disposed of within the organism, in the presence of tissue-change; and, if we remember rightly, this is the conclusion to which the late Dr. Anstie was also led by his own experiments."

These long quotations are deserving of notice, and seem to be decisive as to the

value of alcohol as a food, and its relation to tissue-changes; and its action as a germicide may be inferred when we consider its approximation or close relation to all the tissues of the body, normal and diseased.

The subject is still, however, unsettled, and remains *sub judice*, notwithstanding the amount of attention given it by those foremost in the ranks of investigators in all countries; and we will only have to wait time's development to demonstrate the certainties we are in search of. A great many problems in medicine are still unsolved, but it is not for want of industrious working and striving in the right direction that it is so. But the elements of success will depend not so much on the amount of work as on the right appreciation of the questions involved, and the manner in which it is performed. Theories and hypotheses will amount to nothing so long as they cannot be practically applied. The most practical and useful discoveries have been made as if by accident, after reasoning was at fault and deductions had failed to compute the sum total of the work in view. We now reason in a great measure from analogy, and hope to find in one thing what we imagined we found in another, but we are often mistaken, and no doubt many will be disappointed, or think so, who attempt to treat all cases of diphtheria with alcohol because the following case was cured apparently by that agent.

The case is important in many points, and shows a line of treatment worthy of consideration and imitation:

September 1, I was called to visit M. L., a little girl, 4½ years of age. Three days before, she was a little feverish, had some sore throat and cough, and her mother thought she was suffering from merely an ordinary cold, and paid but little attention to it, even permitting her to go out-doors in that condition. The malaise continued, however, and the child became quite drooping, and could no longer be kept on her feet. High fever set in, with difficult deglutition and hurried breathing and a hoarse cough.

When I saw her, her face was highly flushed, eyes bright and staring, pulse 140, temperature 104.2°, respiration 40. On examining her throat, I found the tonsils and half-arches highly inflamed, and there were several deposits of grayish pultaceous diphtheritic membrane on each tonsil, on the uvula, and on the pharynx.

I painted the parts generally with muri-

ated tincture of iron, and gave her the same remedy internally, combined with chlorate of potassium, and also ordered a diaphoretic mixture of solution of ammonium acetate and spirits of nitric ether, the two to be alternated every hour.

2d, A.M.—Points or patches of deposit had coalesced on the tonsils and pharynx, forming a broad sheet of membrane, nearly covering the tonsils and extending downwards from the pharynx towards the larynx. Her pulse was 144, temperature 104.5°, respiration 46. Treatment continued, with two grains of quinine thrice daily.

P.M.—About the same.

3d, A.M.—But little attempt at coughing,—when attempted, hoarse and muffled; breathing more difficult, and countenance more anxious. Temperature 103.6°, pulse 140, respiration 40, as near as can be taken, the restlessness of the patient making it difficult to do so. Treatment continued, with spray of lime-water to throat every hour.

P.M.—Symptoms more aggravated, but details about the same.

4th, A.M.—Swallowing more difficult, frequent hoarse cough, color fading from cheeks, eyes becoming more hollow, face looks puffed, surface cooler, membrane darker and partly peeling off, and can be removed with brush in spots, leaving raw surface beneath. Temperature approximately 103°, pulse 146, respiration 42. The prostration being so imminent, and the general symptoms becoming so urgent, the treatment changed to four grains sulpho-carbolate of sodium in glycerin and syrup every two hours, a teaspoonful of brandy every three hours or less, or to four ounces daily, and the spray of lime-water to the throat every hour continued. She rejects all food, but takes occasionally a little milk.

P.M.—No material change.

5th, A.M.—Face pale and swelled, anxious and pitiful look, eyes sunken, respiration more oppressed, pulse quick, compressible, and has empty feel; very restless, and hard to administer remedies or examine; sleeps but little. Ordered to be given at once five grains sulphate of zinc every five minutes until vomiting is produced. After third powder, vomited portions of membrane, some shaped like pieces of boiled macaroni. Breathing somewhat relieved, and child disposed to sleep; cannot lie down, but rests in mother's arms. Treatment to be continued, brandy pushed to its utmost limit.

P.M.—Child somewhat easier through the day, but still in very critical condition. Ordered zinc-powders to be given during night if necessary.

6th, A.M.—Patient relieved for some hours yesterday after taking the zinc-powders, but now the dyspnoea quite as great, or greater. Breathing abdominal, almost total collapse of lungs. Administered five-grain powders

of sulphate of zinc every ten minutes. Emesis produced after third powder, with dislodgment of more membrane. Brandy continued more frequently, to six ounces daily. Spray and sulpho-carbolate of sodium continued the same, with all the nourishment she will take.

P.M.—Prostration marked; general symptoms not improved.

7th, A.M.—Child somewhat better. Membrane has disappeared from throat, as far as can be seen. Respiration easier, pulse-temperature ratio not so high, skin has more warmth, can sleep some at short intervals in mother's arms, takes milk, beef-extract, and medicines more willingly.

P.M.—General condition better; shows it by her appearance and actions.

8th, A.M.—Still some improvement in respiration, pulse, and temperature. On auscultating chest, find more air enters lungs, with some expansion of chest-walls. Cough smothered and hoarse.

P.M.—Condition more satisfactory.

9th, A.M.—Some return of dyspnoea, respiration more hurried. Gave five-grain sulphate of zinc powders again, but nothing appeared in the vomit like "false membrane;" but it relieved the oppressed respiration. Ordered brandy continued *ad libitum*, without restriction, to six or eight ounces, if possible, daily.

P.M.—Patient more comfortable, and a little better in every respect.

10th, A.M.—Patient improved, breathes better, slept more during the night. Has become very fond of the brandy, and motions for it. Cannot articulate; can only cry hoarsely with an effort. Has not been able to articulate from the first.

P.M.—Condition better.

11th, A.M.—Respiration freer and slower, pulse and temperature much reduced, asthenia marked, but patient doing well.

P.M.—Patient still improving. Ordered brandy continued unabated. Other medicines discontinued, but the sulpho-carbolate of sodium to be given at longer intervals. Has taken about forty ounces of brandy in eight days without intoxication or any stupefying effect, and she prefers it to all her medicines.

12th, A.M.—Improvement continues, and the way looks hopeful. No dyspnoea. Can lie on the bed without difficulty or oppression.

16th.—Convalescence has progressed up to this date, and visits discontinued.

The child had partial paralysis of the vocal organs following her attack of illness, and for two or three months could only speak in a deep, coarse, guttural voice. This condition has now passed away.

It seems to me, then, reviewing what has been said, that it is worth while considering whether, in the absence of all

other remedies, diphtheria could not be successfully treated with alcoholic stimulants alone. The correctness of this proposition appears to be verified by the above case, especially in view of the sudden deaths occurring during convalescence. I would myself, I think, prefer to rely upon such treatment if I were confined to one remedy. Brandy is preferable to whiskey, as being more palatable to children.

1211 F STREET.

INJECTIONS OF CORROSIVE SUB- LIMATE SOLUTIONS INTO THE INGUINAL GLANDS AND INTO THE SPLEEN IN SYPHILIS.

BY HUGO ENGEL, M.D.

SUBCUTANEOUS injections of iodine, ergot, and the like have been made as frequently for the purpose of reducing hypertrophied glandular organs, as those of corrosive sublimate with the view of curing constitutional syphilis. Ergot has been employed in a similar manner, not only to diminish the enlargement of the spleen, but also to improve in general leucæmic conditions. While assistant at the clinic of Prof. Da Costa, I made a number of hypodermic injections of the fluid extract of ergot in a case of leucocythæmia. Though the disease was a well-pronounced, almost typical case of the splenic variety of this malady, and though the spleen was more than triple its normal size, leucæmic cachexia nevertheless had not yet developed itself. Six drops of the fluid extract of ergot were daily injected into the skin of the patient immediately over the splenic tumor. The internal treatment consisted of iron. The result was very favorable. Prof. Da Costa had demonstrated the case as a typical one to the class. About two months later the great teacher was able to show publicly the same individual—cured. Many similar cases have been since reported.

Prof. Mosler,* however, was the first to make injections of Fowler's solution directly into the substance of an enlarged spleen. His three cases induced him to draw these conclusions: that such injections are well borne even in large doses; that the effect of the remedy, if employed in the manner indicated, is far more in-

tense and more certain, but that this mode of procedure should not be made use of in *soft* splenic tumors, nor in cases where the cachexia already is so pronounced as to have caused a hemorrhagic tendency; and that in leucocythæmia this treatment was dangerous. His own cases were chronic tumors of the spleen, due to malaria. A fourth case† ended fatally. After the sixteenth injection of Fowler's solution, peritonitis sprang up, and the patient died.

Kussmaul‡ made a parenchymatous injection of sclerotic acid into a leucæmic tumor of the spleen. Only one decigram of the acid was injected, but the patient soon afterwards died. He had been suffering from an advanced stage of the disease, and his death was not due to any poisonous influence of the drug, but to the fact of the injection entering directly into the circulation, the tumor having been of the soft variety.

Peiper§ mentions the conditions which Mosler considers essential for the successful and innocuous injections into the parenchyma of the spleen. The organ must be of dense, solid consistence, and almost touch the abdominal wall; it should at least lie as near to it as possible. Then the patient must have no tendency to a hemorrhagic diathesis, and not be in the state of leucæmic cachexia. Of the utmost necessity is the preparation of the system and of the organ for these injections. The patient has previously to be subjected to a prolonged internal treatment with remedies by the action of which upon the contractile elements of the spleen the quantity of blood in the organ is diminished. Lastly, for several hours preceding and following the operation, the external application of ice-bags to the spleen is necessary. In the three cases quoted above, of Mosler, all these precautions had been attended to.

Notwithstanding Mosler's warning, Peiper|| tried the same treatment—injections of Fowler's solution into the parenchyma of the spleen—in a case of leucocythæmia. The result was exceedingly favorable and very prompt. But Peiper

† Deutsches Archiv f. Klin. Med., vol. xxviii.

‡ Jaeger, Ueber Punction der Milz, etc., Inaug. Dissert., Strassburg, 1880. Referred to by Dr. Peiper, Ueber parenchymatöse Injectionen von Fowler's Solution in einen leukæmischen Milz-Tumor, Deutsches Archiv f. Klin. Med., xxxiv. p. 353.

§ Dissert., loc. cit., Peiper.

|| Deutsches Arch. f. Klin. Med., p. 352 et seq.

* Deutsche Med. Wochenschrift, 1880, No. 47.

also insists upon the same conditions that Mosler found essential.

Lewin, as is well known, was the first to suggest and practise hypodermic injections of corrosive sublimate in constitutional syphilis. He recommended the regions of the glutæi muscles as the most suitable locality. Many cases have been since reported, in which this treatment proved rapid, reliable, and effective, though the local irritation has often given rise to complaints. I have also made use of the same method, but must confess that the internal administration of mild mercurial preparations, with gradually-increasing doses, until salivation is fully developed, or the inunction cure, carried to the same issue, and each of these treatments followed by iodide of potassium, has met with a far greater success in my hands than Lewin's method.

The following accident gave me the opportunity to try a new treatment. May 12, 1882, five young men together came into my office. They had each contracted the primary sore from one and the same woman. I will name them A, B, C, D, E. In A a small vesicle was noted on the third day; B and C observed an erosion of the skin the fifth day; D, on the morning of the sixth day; and E, the most careful of them all, first detected a small ulcer near the prepuce on the ninth day. He at once visited his friends, and in the evening of the same day the five entered my office. Every one had one single sore, evincing induration. All five were young men, varying from 19 to 23 years. All were free from organic disease and otherwise perfectly healthy, almost robust. D and E were brothers, C a distant relation, and A and B simply friends of theirs.

Here was an opportunity for comparison of different forms of treatment. Explaining to them that constitutional differences and those in the time of the appearance of the primary sore necessitated a different remedial procedure in each, I treated them as follows. In A, B, C, and D I cauterized the sore with nitric acid, then applied for a few days lead-water, and afterwards kept the wound dressed with iodoform. In E I removed the indurated part with scissors, and then used iodoform. In none did I employ any internal treatment, save in A, to whom I gave calomel, guarded by opium, in gradually-increasing doses, and B, whom I put under what I shall

call, for the sake of convenience, the preventive treatment, which I shall describe later. C had a bubo five weeks after the initial sore, D on the sixteenth day, and E on the twenty-seventh day; while in A and B a very small bubo developed itself, in B at the end of the fourth, and in A in the middle of the fifth week. I now employed the preventive treatment in D, making the injections directly into the swollen inguinal gland.

To bring the conclusions which I have drawn from these observations into closer connection with the data from which they have been derived, I will here mention what these facts seem to indicate.

That the excision of the primary sore, including the whole indurated part, is of no influence whatever on the further progress of the case. A long experience has taught me that even the cauterization of the primary sore, for this end, probably also is superfluous.

That, whether the patient is put under an anti-syphilitic treatment while the healing of the primary sore is progressing, or not, the fact has very little, if any, influence on the swelling of the inguinal gland; *i.e.*, if the sore would have been followed by a bubo without treatment, no treatment will prevent its appearance; but, if thus treated, the glandular inflammation will be less intense, the gland will swell less. If we accept the theory of the pathologists, who teach that the swelling of the gland in these cases is not due to sympathetic inflammation, but to accumulation of the infectious material, we may explain the fact mentioned by claiming that in the two cases A and B the anti-syphilitic treatment had in so far diminished the virulence of the poison as the irritation of the gland was less severe.

Varying in time from five weeks up to seventeen weeks, all the cases showed evidences of constitutional affection save D's, in whom, up to this time, no secondary or any other symptom of lues has as yet been observed. In A and B the symptoms were very moderate,—the former suffering from a very mild form of psoriasis palmaris, and the latter from an angina syphilitica, not in the least severe. C and E had roseola, which, in E, was followed by a syphilitic eczema-eruption all over the body, and almost synchronously by violent angina coupled with ulceration of the right velum. I put A, B, and E through

an inunction cure, followed by iodide of potassium, as described by me in a former article in this journal.* They also have since had no symptom of lues. In C's case I made use of the preventive treatment, injecting the remedy into the parenchyma of the spleen. The treatment was commenced the third day after the appearance of the roseola, the latter having lasted but two days. Thus far, up till to-day, no further constitutional disturbance has been evinced in C's case.

From these data I conclude—and I will add that my experience in general leads me to the same result—that a thorough anti-syphilitic treatment, instituted during the progress of the primary, *indurated* sore, while not preventing the constitutional affection, probably not even postponing it, has a subduing influence on the whole future course of the lues: the symptoms are decidedly milder and more amenable to treatment.

That the preventive treatment, if applied to the bubo, and ere other constitutional symptoms have appeared, seems to eradicate the disease; and

That, if the same treatment be made use of, either at the time of roseola or at any time preceding the constitutional symptoms, and is applied to the spleen, it seems to extinguish the poison of syphilis and to prevent further constitutional affection.

Lastly, from an experience extending over a period of over twenty years, and owing to accidental circumstances specially considerable in luetic maladies, I am convinced that syphilis can be eradicated.

In a future article I shall endeavor to adduce the proofs for this my assertion. Suffice it to-day to say that three months ago I had for the first time the opportunity of watching the effect of anti-syphilitic treatment in the third generation. When yet a student, twenty-one years ago, I had a patient under my charge in Berlin, whom I treated according to the principles laid down in the article above quoted.† Two years later I met the man here in our city, when he asked my opinion about his marrying. I advised him to continue taking the iodide of potassium twice a year, but told him that he might marry, which he did. A year later I delivered his wife of a healthy daughter, whom I attended for pertussis, varicella,

morbilli, and croup, once also for tonsillitis acuta, and once for a neuralgia caused by a decayed tooth. Three months ago I delivered her of a male child, which, up to this time, does not show the least trace of hereditary lues. In a second case, still more interesting, and to be reported by me at some future time, an individual cured of constitutional lues for the second time (seven years after the first) contracted a hard chancre, and this was again followed by systemic affection. I showed this probably unique case to a number of friends.

Regarding the preventive treatment: this consists in the injection of a solution of corrosive sublimate, first into the enlarged inguinal gland, when this succeeds an indurated primary sore,—it may probably, also, be wise to do so after the multiple ulcer,—and at a later stage into the parenchyma of the spleen. Whether it will always be possible to make such injections into this organ, I do not know. That the spleen is enlarged in lues, my experience has sufficiently proved to me. Sometimes this hypertrophy is considerable, without speaking of those fatal cases in which we find gummata in the liver, spleen, and other organs, and in which the spleen is sometimes greatly augmented in size. In my patient this organ was rather large, and the abdominal walls were not thick. I made him lie on his left side, and about an inch below the ribs, where I could palpate the dense organ, close to the skin, I pushed in my needle, nearly two inches long. Twenty-one such injections were made. They were followed by very little reaction. Once the patient had a chill, a few minutes after the injection, and some fever ensued; another time he felt sick at the stomach; but these were all the untoward symptoms noted. The local reaction was very moderate.

The injections into the bubo were made with a small and very thin needle, but, notwithstanding its sharp point, the patient complained of the pain. These glands are, in the beginning, very hard and dense. The fluid itself always caused a little, and sometimes even severe, pain, lasting nearly half an hour. Should later experiments prove that these injections into the bubo are invariably followed by such good results as those noted in D, I shall always employ them in preference to those into the spleen,—*i.e.*, if I see the case early enough; and I shall even later

* Philadelphia Medical Times, December 22, 1877, p. 121.

† Ibid.

do so if there be still observed enlargement of an inguinal gland.

The syphilitic poison is probably absorbed only by the lymphatic system, and thence is carried into the circulation. It is possible that while the poison in the mucous membrane easily causes erosion and then ulceration, arrived in a gland, like the inguinal, it perhaps does not proceed further until the pathogenetic substance—be it a bacillus or anything else—has reached a certain grade of development, when it is carried away into the circulation. If we can succeed in destroying the poison anywhere, the bubo would be the place to attack it. It then is not yet in the system, and we have an easy access to it. If it be too late, if the poison have entered the circulation, then I would advise a further trial with injections into the parenchyma of the spleen, though I see all the difficulties in the way, which in my case were very small. Should the spleen be but moderately enlarged, and should a great amount of adipose tissue intervene between the abdominal covering and the spleen, such injections, if not impossible, become impracticable. For, even granted that we have a needle long enough to reach the organ, how are we to be positive that the needle really enters the spleen? Still, there is one consolation: a solution of corrosive sublimate will always be less dangerous than one of arsenite of potassium, the consequences of which Mosler dreads so much under certain circumstances. A solution of only one-sixteenth of a grain of the bichloride of mercury, if it contains no other obnoxious ingredients, will scarcely cause any danger should it even enter the peritoneal cavity or find its entrance into the bowel.

This leads me to another important point. When I made these injections I first placed my needle into a ten per cent. solution of carbolic acid, and then drew up into the syringe a like solution, filling with it the barrel of the instrument. Then washing it out with an aseptic solution of salicylic acid and cleansing with the strong carbolic acid fluid the skin at the place where the injection was to be made, everything was prepared for the injection of the corrosive sublimate. These precautions were perhaps superfluous when employing such a powerfully aseptic fluid as the solution of the bichloride,—at least superfluous with the inguinal gland; while

with injections into the spleen one can scarcely be sufficiently careful.

There is one question still to be decided, if it ever be possible to determine it. Did these injections of corrosive sublimate act as I have indicated, or did they simply exert the same effect that mercury always has in this disease? or, in other words, was there any advantage gained by making these injections into the parts specially selected, or would they have done the same amount of good if they had been instituted somewhere else,—in the glutæus muscle, for instance?

In those cases where I succeeded in eradicating the lues to such an extent as to observe no relapse of any kind during a period of two years, I had gradually increased the dose of the preparation of hydrargyrum administered until typical salivation had commenced and continued for three to six days, when the treatment had been followed by a prolonged course of iodide of potassium, to which, for the sake of precaution, the patient had to resort twice a year after his discharge from my observation. But in those cases where I had employed the hypodermic injections of corrosive sublimate as a preventive, I had anxiously avoided salivation, and had ceased the treatment on the least indication of approaching inflammation of the gums, and had followed it by no after-treatment. Besides, by no treatment had I been enabled thus far to prevent the normal course of constitutional affection from its onward march, no matter how much I might have influenced its degree of severity. But here in D's case the disease seemed arrested with the bubo, in C's case with the roseola. During the last fifteen years I have often employed some form of mercurial treatment up to full salivation, either during the healing of the primary sore, or immediately after its having healed, to influence the remaining induration and its possible consequences, but in those cases that I was able to follow up, I never succeeded in totally preventing further constitutional affection, though the symptoms were very mild.

Certainly, some cases never returned to me. Some among them may have never been troubled by any secondary symptoms and enjoyed the immunity of D and C. There have, besides, been cases reported—I, at least, think I have read of such—in which a Hunterian chancre succeeded by

a *non-suppurating* bubo nevertheless was not followed by constitutional lues. Whether there are on record any authenticated cases of such a kind, I am not prepared to say, but repeat that all cases of hard chancre, followed by a non-suppurating bubo, and continuing under my observation, had heretofore become the victims of secondary symptoms, no matter what their treatment during the progress of the primary sore.

In the light of all this, I think I am entitled to say that there is some reason why, in cases of enlargement of an inguinal gland, following an indurated primary sore, hypodermic injections of corrosive sublimate should be tried, and in cases where there has already been an indication of further constitutional affection, as roseola, and where no special accidental conditions (as above enumerated) contra-indicate their employment, the same solutions should be injected into the parenchyma of the spleen, and in both cases be continued until the first warning symptoms foreshadow the approaching mercurial stomatitis.

I do not by any means wish to contend that I feel warranted in drawing definite conclusions from the two cases reported; still, in modern times, if one thinks he has made an observation which may tend to do some good and have some value, one has to be a little quick in making it known, or come too late. But the main reason inducing me to this early report consists in the twofold desire to see the treatment tried in a larger number of cases, and, should it possess the value it apparently promises, to have its benefit accrue to the immense number of unfortunates who are the victims of this baneful disease.

507 FRANKLIN STREET, PHILADELPHIA.

REVIEW OF THE PROGRESS OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,

Electrician and Neurologist to the Presbyterian Hospital,
Physician to St. Mary's Hospital, etc.

GALVANISM has been successfully used in destroying the Dracunculus, or Guinea-worm, a terrible African pest. The worms, if broken off in extracting them, produce great irritation and sloughing, death resulting not unfrequently; but several cases are reported in the *British*

Medical Journal, in which, galvanism being applied during traction on the worm, it came away entire.

Cutaneous faradization is recommended by Rumpf in progressive locomotor ataxia where the initial symptom is atrophy of the optic nerve; but the writer has never had good effects from faradism in ataxia of any kind, so far as durable results are concerned.

Thompson, of Indianapolis, reports in *The Archives of Ophthalmology*, vol. xii. p. 183, an interesting case of cystic orbital tumor treated by electrolysis. The tumor protruded downward and outward from tendo oculi behind the upper eyelid, and the motion of the eye was very limited; vision, $\frac{2}{10}$. A trocar and canula being introduced, 3iii of dark fluid were removed. The positive was connected with the canula, the negative applied over the temple of the same side, and a stable current from a Stohrer of twenty cells passed for several minutes. Considerable inflammation occurred, and persisted for several days, but the cyst was destroyed, and in a month vision had risen to $\frac{3}{10}$.

Neftel has returned to electrolysis in treating malignant tumors, destroying them at a single operation. A platinum anode is plunged perpendicularly into the tumor down to its presumed point of implantation, and from three to five cathodes placed on the periphery of the tumor. The current is then closed and rapidly carried to its greatest power (thirty to sixty elements). The position of the cathodes is changed about every five minutes, so as to cover every part of the tumor. The operation lasts about an hour. The tumor becomes livid, gray, and finally black. There is a very slight general and local reaction. In two or three days the part operated upon becomes cold, and, after some discharge, finally comes away *en bloc*, leaving a denuded surface, which is soon covered by healthy granulations. Neftel has also treated benign tumors by this method, though they do not require such energetic treatment as those of the malignant type. The conclusions which he draws are:

1. Electrolysis is an antiseptic method, and as such may be combined with the ordinary methods of operation.
2. It is preferable to any other method in the treatment of malignant tumors.
3. Malignant tumors should be entirely

destroyed by the operation, and at a single séance. In benign tumors it is sufficient to establish a retrograde metamorphosis.—*Virchow's Archiv.*

GALVANIZATION OF THE BRAIN, AND ITS VALUE IN THE TREATMENT OF CHOREA.

Charles L. Dana, M.D., details the effects of passing a galvanic current through the healthy human brain, the manner in which these effects are brought about, and gives the notes of eight cases of chorea, occurring in patients ranging in age from eight to fifteen years, treated more or less systematically by cerebral galvanization.

The average duration of the treatment was twenty-five days, of the symptoms thirty-four days, against six and eight weeks in thirty other cases, treated chiefly by arsenic. Dr. Dana, however, does not base his belief in the efficacy of electricity so much upon the statistics of duration as upon the fact—which occurred too frequently for mere coincidence—that evident improvement in the symptoms followed each séance, and continued for twenty-four or thirty-six hours.

What is claimed for “anodal galvanization” is that it is a most valuable adjunct in the treatment of chorea; that, if employed daily for a week or ten days, either with or without the simultaneous administration of arsenic, it materially shortens the duration of the majority of attacks occurring in children.

It is to be applied in the following way. A large sponge electrode of flexible brass, two by four inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted, and the electrode applied over the side of the head above the ear. In hemi-chorea it need only be applied over the side opposite to the one affected. The other electrode is placed in the hand of the affected side. The electrode upon the scalp is made positive, and a stable current of from three to six Stohrer's, or four to eight Daniell's cells, is passed from three to six minutes.

IN BASEDOW'S DISEASE.

Dr. Chvostek recommends (*Centralbl. für Klin. Med.*) the following method:

1. The ascending constant current applied to the cervical sympathetic on each side for at the most one minute.
2. The same to the spinal cord (the anode at about the fifth dorsal spine, the cathode high up in the cervical region).

3. Through the occiput (one pole at each mastoid process), and in certain cases also through the temples, a constant current for at the longest one minute, and so weak that the patient can feel but the slightest sensation of burning. Sometimes also local galvanization of the thyroid gland with a weak constant current for about four minutes, the current to be reversed at the end of each minute. The application should be made every day.

ELECTRICITY AS A GALACTAGOGUE.

M. E. Labbé (*Union Médicale*) calls attention to the value of electricity as an adjuvant to other means for establishing or restoring the secretion of milk in puerperal women. When the secretion is absent or scanty, or when it has been suppressed from any cause, in addition to other modes of treatment (suction of the nipple, poultices of leaves of the *Ricinus communis*, etc.), it is well worth while to employ a weak current of electricity. The mammary gland is to be gently compressed between two electrodes consisting of moistened sponges. A mild current passed twice a day, for from ten to fifteen minutes at a time, will materially increase the functional activity of the gland. [The efficacy of static electricity in this direction has been reported in the *Times* by the writer, and confirmed by further observation in many cases.]

ELECTRICITY IN AURAL PRACTICE.

In nervous deafness, McBride, in “*Clinical Notes on Ear-Disease*,” *Archives of Otolaryngology*, vol. xii., Nos. 3 and 4, reports success in several severe cases from induction-currents applied to either tragus, without any other treatment.

Dr. H. L. Morse reports his observation of cases of tinnitus aurium treated in Vienna. Galvanism was employed,—the anode to the tragus, the cathode to the neck or other indifferent point. Weak currents were used in beginning, and these were gradually increased until sharp stabbing sensations were experienced, the force being thereupon reduced slowly to zero. The dull aching pain associated with many such cases was generally relieved promptly; often it was radically cured. If galvanism failed, faradic treatment usually was successful.

Electricity has also been extolled by Urbantschitsch in otalgia as valuable in

relieving pain generally, without reference to the ultimate cause.

In the common earache of children, the writer has found galvanism successful after failure of chloroform-vapor, atropia, and the ordinary methods employed.

ELECTRICITY IN SUPERINVOLUTION AND SUBINVOLUTION OF THE UTERUS.

Dr. A. D. Rockwell, of New York, in a paper published in the *Medical Record*, January 19, 1884, comments on Dr. For-dyce Barker's remarks made at the last meeting of the American Gynæcological Society, and says,—

"In the following case, lately seen and treated, some of these symptoms were distinctly marked, and so far forth are confirmatory of Dr. Barker's experience.

"At stated periods there was severe headache, pelvic pains, and nausea. Associated with these symptoms, and far more persistent than any of them, was a condition of melancholia that became intensely aggravated immediately preceding the effort at menstruation, and manifesting itself by an insuperable aversion for persons and things that ordinarily excited in her no such feeling. Two years previously she had suffered from a difficult and dangerous labor, and since that time the menses had not appeared, excepting on two or three occasions, when it was exceedingly scanty and in other ways unnatural. Upon measurement, the uterus was found to be but about one and three-fourths of an inch in length. The patient was treated almost daily, for about three months, by internal applications of both faradism and galvanism, when a slight show appeared, for the first time in eighteen months. At the next menstruation, a few weeks subsequently, the flow was much more abundant.

"In subinvolution of the uterus, my experience, though limited, has been somewhat greater than in superinvolution. The apparently paradoxical action of electricity, as illustrated in the treatment of superinvolution and subinvolution of the uterus, is not a new thing. We constantly find that it relieves both hyperæsthesia and anæsthesia. It is used successfully to excite torpid excretory processes, and also to restrain this function when too active. In the same way it may cause increase or it may cause diminution in the size of a part or organ.

"Goitres, for example, are readily re-

duced in size, and sometimes entirely disappear, under simple external galvanization, and so with other forms of morbid growths. On the other hand, it is well known to all whose experience has been at all extended, that normal tissue may be surprisingly developed by persistent local applications."

ELECTRICITY IN DERMATOLOGY.

Dr. W. A. Hardaway contributes an article on this subject, which concludes as follows:

"I will close by enumerating a few of the diseases of the skin in which electrolysis may be confidently employed, viz.: pigmented nævi, small fibromata, miliary nodules of lupus, sebaceous cysts, xanthoma (Fox), warts, cutaneous horns, and some stages of epithelioma. From certain observations that I have made in regard to the action of this means in hypertrophied scar-tissue, I am inclined to look upon it favorably in keloid.

"In short, it may be confidently stated that whenever it is necessary to use a destructive agent on the skin,—one that is readily managed, that causes no hemorrhage, and leaves few scars,—there is none better or more efficient than electrolysis."

Massey believes (in the *Medical News* of January 5, 1884) that faradism cannot hold a prominent place in the therapeutics of skin diseases beyond stimulation of the sensory nerves. In alterations of the nutrition it is manifestly powerless, he states. In this he decides against the experience of dermatologists who advocate induction currents in varied forms of eczema, psoriasis, and acneiform eruptions. The writer has had decided good effect from faradism in these forms of disease, particularly in private practice. General faradization has thus repeatedly acted promptly and decidedly both from its local stimulating action and its tonic effect on the general health. Exception must likewise be taken to the statement that "in *most* individuals much more current will pass through a circuit including the body from the inner surface of one forearm to one of the popliteal spaces than will pass through a circuit made by placing the poles *two inches* apart on the back." Upon what this statement is founded we are at a loss to know. Many years ago we made the rule inflexible of *definite measurement* in applying currents to any and all cases,—not so many cells (for electro-motive force varies

according to the condition of the battery), but so many millivebers (as the late nomenclature defines it), or so many volts, as now known,—and the measurement is always made with a reliable *galvanometer*, not a galvanoscope such as goes along with the ordinary battery. Practice in determining motor points and in applying indifferent electrodes or polar methods should familiarize those who have much to do with electricity, and we felt somewhat startled at this announcement. Not that it is novel, for the statement occurs now and then in popular handbooks. The mean of thirty experiments lately made in different persons with derived currents through a Wheatstone bridge, resistance intercalated by a standard rheostat and definitely measured by a tangent galvanometer, shows this statement to be very decidedly erroneous. The mean resistance was nine and seventeen-twentieths times greater in the brachial-popliteal path than at the most resistant path of *four* inches on the back. At distances of two, three, and four inches, resistance was uniform or nearly so. Taking the general resistance of the human body as twenty-five hundred ohms, a distance of two or three inches between rheophores is negligible, when the electro-motive force is maintained by at least one hundred cells of good type, enough resistance being made by the rheostat to modify the current to a bearable degree and to steady it. The writer holds that the common method of applying *a few cells* is faulty, and the plan he uses is the one found by electricians in Europe to be the better one. The proof is easily made by any one possessing the proper equipment for absolute measurement and the ability to work it out. The simple word of a patient as to how it feels is at the bottom of this old but erroneous statement with most authors.

Three interesting cases are given which were cured by galvanism,—two of eczema and one of herpes.

Seiler exhibited at the late session of the Medical Society of the State of Pennsylvania a new arrangement of incandescent lighting of the eye, ear, throat, or nasal cavities. The effect was good, and in some respects superior to that obtained by gas or oil. The battery was an unusually handsome one, of the "electro-dynamic" type.

246 NORTH TWENTIETH STREET.

VOL. XIV.—19*

AN OVARIAN TUMOR REMOVED BY ENUCLEATION.

BY DONNEL HUGHES, M.D.

A. W., age 28 years. Attended her in December, 1883, with acute peritonitis, which subsided in about two weeks. When the abdomen was examined after the swelling due to the peritonitis had subsided, a cystic tumor of the right ovary was discovered. On February 13, after consultation with Drs. S. S. Stryker, J. P. Stidham, Frederick Carrier, and Henry Muller, it was determined to remove it. With the kind assistance of the above-named gentlemen, I was enabled to perform the operation.

An incision was made in the median line of the abdomen, extending from about an inch below the umbilicus almost to the symphysis pubis. When the peritoneum was divided, it was found that the tumor was so adherent to the surrounding structures that it could not be removed in the ordinary way without great danger to the patient's life. We then determined to enucleate. The cyst was tapped, and the characteristic ovarian fluid escaped. An opening into the outer layer of the cyst was made, through which my fingers were introduced, and, after a great deal of tedious work, removal was accomplished. The bleeding was so slight that it was controlled by hot-water applications. Throughout the operation not a ligature was used. The abdominal cavity was thoroughly sponged, a glass drainage-tube inserted, and the wound closed with silver sutures made secure by compressed shot. The drainage-tube was removed on the eighth day, and the stitches on the tenth day, when the wound was healed, except the space that was occupied by the drainage-tube. The wound was dressed with ung. carbolici, and the abdomen covered with cotton secured by a flannel binder. The urine was drawn every four hours for the first three days; after that time about three times in twenty-four hours. One-grain opium suppositories were administered every four hours while awake and in pain.

The diet for the first week consisted of milk and lime-water at regular intervals. After that time it was much more liberal. She has entirely recovered, and is now able to go out of the house.

17 SOUTH FORTIETH STREET.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF LOUIS A. DUHRING, M.D., PROFESSOR OF DISEASES OF THE SKIN IN THE UNIVERSITY OF PENNSYLVANIA.

Reported by HENRY WILB, M.D.

SMALL MILIARY PUSTULAR SYPHILODERM.

A YOUNG man, 22 years of age, exhibits a generalized eruption over the trunk and extremities, and in such cases it is always well to examine a large surface to obtain a general view. The eruption occupies the back from the nape of the neck downward, and is especially well marked on the buttocks, flexor surfaces of the thighs, and legs. It is a typical case of the small miliary pustular syphiloderm. The lesions consist for the most part of pin-head-sized, acuminate pustules, situated on a slightly elevated, reddish base. They show a tendency to form in clusters and circles, here and there running together, forming patches. On the upper part of the back are several acne lesions of a papular character in conjunction with numerous comedones. The same is to be noted upon the forehead. The suboccipital, inguinal, and cervical glands are engorged, and the fauces are in a state of hyperæmia.

According to the statement of the patient, he had a hard chancre about eight weeks ago, and an induration is still perceptible on the right side of the inner surface of the prepuce near the sulcus. This eruption not infrequently is the first manifestation of cutaneous syphilis, skipping the erythematous or macular manifestation. It may make its appearance suddenly, or slowly, as in this case, developing during several weeks. It may, as has also been the case here, be accompanied by malaise, fever, and other general symptoms, besides slight itching. The patient is a weak, debilitated, somewhat cachectic subject, and the mixed treatment will be ordered, as follows:

R Hydrargyri biniodidi, gr. i;
Potassii iodidi, ℥iiss;

Syr. sars. comp., f℥iv. M.

Sig.—One teaspoonful with water after each meal.

HYPERIDROSIS OF THE SOLES.

A man, 25 years of age, presents a distressing condition of the soles of the feet. Little or nothing can be seen except a macerated state of the skin, due to profuse sweating. This is a tolerably common

affection, and consists of a functional disturbance of the sweat-apparatus. A saturated solution of boracic acid often exerts a beneficial influence; also tannic acid in solution or in powder, and salicylic acid. The following powder may also be used:

R Zinci oleati, ℥ii;

Talci,

Amyli, aa ℥iii. M.

Sig.—Dusting-powder.

As a lotion, belladonna in the form of the tincture may also be applied with good results in some cases.

HEREDITARY INFANTILE SYPHILIS.

A child 5 weeks old presents an eruption which, according to the statement of the mother, first appeared about two weeks ago, and spread over almost the entire surface of the body, except about the genitalia. The diagnosis lies between eczema and syphilis, but the latter creates such characteristic lesions that it is almost impossible to confound it with any other affection. The eruption is a maculo-papular syphiloderm of a dull-red coppery color, and the large papular lesions and patches, especially on the lower extremities, present a distinct infiltration.

The case requires treatment, or the child will soon succumb. The treatment which I would recommend is in the form of baths of corrosive sublimate, or inunction of mercurial ointment, one part to three of lard, a small piece being smeared on a flannel bandage and bound to the abdomen of the child, and allowed to become rubbed in by the movements of the child.

TINEA FAVOSA CAPITIS.

A young man, 20 years of age, exhibits a typical example of this rare disease. It involves the greater part of the scalp, and exists in the form of sulphur-yellow-colored, more or less circular, cup-shaped lesions. The characteristic shape here is somewhat destroyed by the coalition of the lesions, yet here and there are split-pea-sized masses with a central depression.

It can with safety be said that the patient has been affected with this disease a long time, perhaps five or ten years, for in addition to the crusts there are hyperæmic scars caused by long-continued pressure of the crusts upon the corium. In all cases where there is an extensive development of the disease there is a characteristic "mousey" odor.

Where the disease has existed for a long time, and the patient comes to us irregularly for treatment, it will take sometimes a year or longer to effect a cure; but where the patient is under constant observation, it may be successfully treated in four or six months. The hair must be clipped, and the crusts be removed with olive oil, this being allowed to remain on the part over-night, and in the morning washed off with soap and hot water. After the crusts are thoroughly removed, any of the numerous parasitocides may be employed. Here I will direct the application of a lotion composed of sulphurous acid one part to two or three parts of water, gradually increasing to full strength, followed later by sulphur ointment. Epilation must also be practised daily.

SYPHILODERMA PAPULOSUM.

A woman, aged 55 years, has a papulosquamous eruption irregularly over the entire surface of the body. The lesions consist of papules about the size of a small pea, some discrete, but for the most part confluent, forming large patches with in places the characteristic semicircular border. There is considerable infiltration of all the lesions, and the surface is somewhat scaly, exhibiting a tendency to undergo absorption. Where the eruption has disappeared, superficial scars remain. It first appeared six months ago, and where as here we have the lesions occurring in patches, we may generally conclude that it is a late form of eruption.

On the lower extremities the lesions are on the way to absorption, and exhibit a dusky brownish color, together with the characteristic circinate form. The patient will probably recover slowly. The treatment consists of the internal administration of the following:

℞ Hydrargyri biniodidi, gr. i;
Potassii iodidi, ℥ii;
Syr. sarsap. comp., f℥iv. M.

Sig.—One teaspoonful three times a day after meals.

Locally the following lotion will be ordered:

℞ Hydrarg. corrosivi, gr. viii;
Alcoholis, f℥ii;
Aquæ ad f℥iv. M.

Sig.—External use: apply twice daily as a lotion.

TRANSLATIONS.

TWO NEW METHODS FOR THE RECOGNITION OF ALBUMEN AND SUGAR IN THE URINE.—Dr. Baas publishes the following procedure for the recognition of albumen and sugar in the urine by means of test-papers.

1. *Method for the Detection of Albumen.*

—One strip of paper is soaked in concentrated citric acid and dried, and may be stained red with litmus to distinguish it from the other strip of paper, which is impregnated with a three-per-cent. solution of corrosive sublimate containing twelve or fifteen per cent. of iodide of potassium, and also dried. One of each of these strips is shaken up in a glass containing the urine to be tested, and allowed to stand. If albumen be present, the urine at once becomes turbid, and in a short time a flocculent precipitate settles. This reaction is extremely sensitive, and will show the presence of one part of albumen in a thousand. Through the excess of iodide of potassium, iodide of mercury and potassium is formed, in the place of the chloride of mercury and potassium, with chloride of potassium in solution. It is through the formation of iodide of potassium and mercury that the albumen is precipitated.

2. *Method for the Detection of Sugar.*—

One strip of filter-paper is soaked in a strong solution of pure indigo, and a second in a concentrated solution of bicarbonate of sodium. A piece of the indigo paper is placed in water until it becomes of a light blue color (it must not be too dark). The urine is then added, and the mixture boiled for several minutes with some large pieces of the sodium paper. If sugar be present, the light blue color either disappears or changes into yellow. This test may also be applied to albuminous urine, as the bicarbonate of sodium holds the albumen in solution. It will serve for the detection of sugar in $\frac{1}{40}$ or $\frac{1}{100}$ per cent. solution.—*Deutsche Med. Zeitung*, April 3, 1884. S.

GONORRHOEAL RHEUMATISM. — Struppi has had an opportunity of studying eight cases of gonorrhœal rheumatism. He finds that it only occurs as a complication of gonorrhœa when the primary disease has passed the compressor urethræ and implicates the prostatic portion of the

urethra. In all eight cases the rheumatic symptoms first appeared between the fifth and tenth week after the contraction of the disease. Ordinarily, the rheumatism was confined to one joint, especially the knee. In three of the eight cases the sacro-iliac synchondrosis and the left maxillary articulation were also transiently affected, and in three cases there was epididymitis of the same side as the joint-complication. Fever and pain, when present at all, are much less marked in this disease than in ordinary acute rheumatism, while heart-complications are always absent, though ophthalmia may occur. When rheumatism has once occurred as a complication of gonorrhœa, it is pretty sure to occur with subsequent gonorrhœas, or even with exacerbations of chronic prostatic gleet. With the onset of the rheumatism the discharge becomes reduced in amount, or may even disappear.

The treatment should aim at the prevention of the extension of the disease to the prostatic portion of the urethra. If the rheumatic affection be already present, the author recommends rest in bed, cold applications, reduction in diet, and the administration twice or three times daily of five or six grammes of salicylate of soda, and friction of the joint, after pain has disappeared, with glycerin solutions of iodine and iodide of potassium.—*Centralb. f. Chirurgie*, March 22, 1884. s.

THE MICRO-ORGANISMS OF ACUTE OSTEO-MYELITIS. — In the *Deutsche Medicinischen Wochenschrift*, No. 46, 1883, Dr. Struck publishes an account of the micro-organism which he had found in cases of acute osteomyelitis, and which he claimed was capable of cultivation, and, when injected into animals in whom the bones had been injured, would produce acute osteomyelitis.

Prof. Rosenbach, who has been for years occupied with this subject, and has also found the same micro-organism, and has succeeded in its cultivation and in the secondary production of acute-osteomyelitis, questions the significance of Struck's results in that they attribute a specific action to this micro-organism. Rosenbach finds, as also is reported by Struck, that, unless the bones have been subjected to some traumatism, osteomyelitis is not produced. In his earlier studies on this disease, Rosenbach found that osteomyelitis might be developed by inoculation of the

most diverse bacterial forms, as, for example, by the fungus of lactic acid fermentation, if the bones have been previously injured. Rosenbach, therefore, concludes that the specific organism of osteomyelitis, if such exists, has not yet been discovered, and believes that acute infectious osteomyelitis, which often occurs in man without any accompanying traumatism of the bones, cannot be produced by any of the micro-organisms as yet known.—*St. Petersburger Med. Wochenschrift*, April 26, 1884. s.

THE THERAPEUTIC APPLICATIONS OF CAFFEINE.—Prof. Riegel draws the following conclusions from an experimental study of the physiological action of caffeine:

1. Caffeine exerts a regulating action on the heart similar to that of digitalis.

2. In suitable doses, caffeine increases the power of the heart, reduces its rate of pulsations, and increases the arterial blood-pressure.

3. Caffeine produces a rapid increase in quantity of the urine.

4. The indications for the use of caffeine are the same as those which govern the employment of digitalis.

5. The most satisfactory results are obtained when small doses are given at short intervals.

6. Caffein is distinguished from digitalis in that the results of its administration appear much sooner and are not complicated by a cumulative action.

7. Even in cases where digitalis has failed to produce any effect, caffeine may frequently be employed with success.

8. It is not advisable to accompany the administration of caffeine with narcotics; morphia should especially be avoided.

9. Caffeine in the form of soluble double salts, as the benzoate of sodium and caffeine and the salicylate of sodium and caffeine, is admirably suited for subcutaneous administration.—*Berliner Klinisch. Wochenschrift*, May 12, 1884. s.

MALIGNANT GROWTH OF THE BLADDER REMOVED BY LAPAROTOMY.—Prof. Guyon, in a case of a man 58 years of age, with hæmaturia, found a malignant neoplasm in the bladder, attached by a pedicle. By hypogastric incision the bladder was opened and a growth the size of a small hen's-egg removed. A Lister dressing and drainage-tubes were employed. The patient recovered.—*Bulletin Général de Thérapeutique*, April 15, 1884.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 14, 1884.

EDITORIAL.

MEDICO-LEGAL NOTES.

THERE has been a good deal of discussion in the legal papers and before medico-legal societies over the bill before the New York Legislature allowing a person to prove his will before his death. It is conceded that it is very desirable to prevent the disgraceful scenes now frequently enacted in the courts upon the probate of a rich man's will; but there is a great difference of opinion as to the advisability of permitting the contents of a will to be made known prior to the testator's death. The present bill seems to require this to be done, and it is quite likely that a disinclination to have the nature of the distribution known will be as strong in influencing the action of testators as the desire to prevent unseemly wrangles in court over the will. The most practical proposition seems to be to allow a person to get the decision of a court as to his testamentary capacity, while directing that the will shall not be opened until after the testator's death.

A decision interesting to physicians was recently rendered in the courts of one of the Western States. Two surgeons had been employed in a certain case, but in different ways and for different compensations. The patient did not seem satisfied with the treatment, and refused to pay either of the bills rendered. As a result, suit was shortly brought by one of the surgeons, and defended on the ground that the services were of no value. The court held, however, in favor of the surgeon, and judgment was given for him. This result was so unsatisfactory to the patient that he thereupon began a suit for

malpractice, and one of the defences interposed was that this question had been, in effect, adjudicated in the previous suit and could not be again raised. This defence the court held to be a good one, deciding that the former suit was a bar to the second one. This decision is only one of several in the various States holding the same way, so that a physician or surgeon need not fear a direct suit for damages from malpractice if the value of his services have been acknowledged in a suit to recover the amount of his bill.

Two corporations with long names have been litigating with each other in the United States Supreme Court on a question of some general interest. The parties are the Butchers' Union Slaughter-House and Live Stock Landing Company against the Crescent City Live Stock Landing and Slaughter-House Company, and the question is whether an exclusive privilege granted by the Legislature of Louisiana can be taken away by a provision of the new Constitution of the State. The decision which has just been rendered is to the effect that the Legislature exceeded its powers in granting an irrevocable license. The grounds of the decision are interesting, and are as follows: "(1.) That the regulation of certain unwholesome or dangerous trades, such as the slaughter-house business, the manufacture of gunpowder, etc., which may become detrimental to the public health or safety, is included in what may be called the police powers of the State. (2.) That the Legislature cannot by any contract limit the exercise of these police powers to the prejudice of the general welfare. The preservation of the public health and the protection of public morals are so necessary to the best interests of the social organization, that a wise policy forbids the legislative body to divest itself of the power to enact laws for the preservation of health and the repression of crime. Such power cannot be sold or bargained away under any circum-

stances, as if it were merely a privilege which the legislator could dispose of at his pleasure. (3.) It follows from these considerations that the State of Louisiana had, and could properly exercise, the power to revoke the exclusive privileges granted to the appellees in this case, and that the State Constitution of 1879, and the ordinances of the city of New Orleans complained of, are not void as impairing the obligations of the appellee's contract."

JEQUIRITY.

RECENT researches into the peculiar action of jequirity in causing inflammation of the conjunctiva when introduced into the eye have disproved the hasty assumption that it was due to the presence of a bacillus. Dr. E. Klein has found that the bacillus was of itself quite incapable of causing ophthalmia, and, further, that the pus from a case of ophthalmia contained no bacilli. Dr. Neisser, of Breslau, has arrived independently at the same results, and Drs. Salomensen and Dirckinck-Holmfeld, of Copenhagen, claim to have found the active principle, although unable to extract any alkaloid.* The active principle is insoluble in chloroform, alcohol, benzine, or ether; it is comparatively soluble in water, and very soluble in glycerin. It is destroyed by exposure to a temperature of from 65° to 70° C. maintained for an hour. The quantity of active principle contained in .00001 gramme of jequirity-seed developed a well-marked conjunctivitis. If injected hypodermically into mice or frogs, the poison quickly kills.

In confirmation of the statement that the activity of jequirity is not due to a micro-organism, is the fact that the dialysate of the drug has been found to possess all the powers of the recent infusion, and has been used for some time in the

New York hospitals; the dialysate, ordinarily being diluted with five parts of water, in this way has been found to act very satisfactorily.

ELECTION OF A SUCCESSOR TO PROFESSOR STILLÉ.

THE Trustees of the University of Pennsylvania, at a meeting held June 3, elected William Pepper, M.D., to the chair of Principles and Practice of Medicine in the Medical Department, which was made vacant at the close of the last session by the resignation of Prof. Alfred Stillé. The great ability of Prof. Pepper as a lecturer, as well as his high professional attainments, has been displayed in such a decided manner in the chair of Clinical Medicine that no doubt can be entertained, on the score of fitness for the position, of the wisdom of the choice of the Trustees.

Prof. Pepper brings to his high position experience, energy, and erudition, and, as he has worked so earnestly and successfully for the welfare of the University in the past, it is hoped that he will still continue his labors for an institution in which every citizen of Pennsylvania feels a direct and personal interest, and whose faithful management should be regarded as a sacred trust by those who are called upon to administer its affairs.

LEADING ARTICLES.

THE AGITATION IN GERMANY CONCERNING AMERICAN PORK.

IN Germany, when it happens that a number of persons become simultaneously the victims of one and the same disease, a report concerning the nature of the probable cause must be sent to the highest tribunal of the nation, the "Scientific Deputation," in Berlin, and must, therefore, come before Prof. Virchow, who is the pathologist of this Deputation. Thus it happened that Virchow, when acquainted with the interdict of Bismarck

* Weekly Medical Review, April 5, and American Druggist, June.

on the importation of American pork, was surprised that in his official capacity he had not met with cases of trichinosis in American ham, bacon, or sausage. With his usual thoroughness and pre-eminent skill, he at once set about investigating this question. The result of his investigations has been published in the last number of his *Archiv für Pathol. Anat. und Physiologie*. On account of the great interest the affair has for Americans, and on account of an important discovery made by Virchow while pursuing these researches, we make the following abstract of his article:

Virchow proves, first, that there has been recorded in Germany only one instance of trichinosis imported with American pork. This was based upon no better foundation than the following. A Dr. Folke, of Bremen, now deceased, reported, two years ago, that a number of persons had become sick with trichinosis from eating this pork. He mentioned no names, gave no figures, and said in his report to the Bremen authorities (whom he induced to issue a warning against eating American pork and to request Chancellor Bismarck to interdict its importation) that he had found a large number of the chalky incrustations of trichinæ in the suspected ham. But he never discovered a living trichina. Similar requests from other parts of Germany reached the Chancellor, but in none of these cases was a living trichina detected.

Making use of the complicated machinery of the government at his disposal, and which permits the minutest inquiries in such cases, Virchow then commenced to demand reports from all medical sub-stations. The result has been that he found no single case in all Germany where trichinosis had been traced to American pork, and not a single case where, even when the chalky incrustations were met with in the ham, bacon, or pork, a living trichina had been seen.

Next, the great pathologist himself examined one of those hams imported from America and containing the chalky deposits referred to, which were said to be infected with trichinæ. But a careful investigation, combined with a large series of similar researches, carried on under his own supervision, under the direction of his experienced and well-known assistant, Dr. Israel, and the expert of the Berlin slaughtering-establishments, proved that

these chalky incrustations had not been at all caused by the trichinæ, but by actinomycetes.

In a former article Virchow had shown that knots and calcareous deposits are met with in the muscular tissue of the hog, which are caused either by cysticeræ or by guanin. But both are easily distinguished by an expert in such examinations from those produced by trichinæ. Far more difficult is it to distinguish between the chalky incrustations of trichinæ and those of actinomycetes. These are the differential points: in trichinosis the chalky deposits are found embedded in the muscular tissue and surrounded by healthy fibres, only pushed out of place, while those of actinomycetes are larger, usually have a more rounded form, and the muscular tissue in which they reside is inflamed, and the degenerated muscular fibres mingle with the chalky deposit and grow into it. The finest test, however, is the microscopical examination of recent deposits after they have been colored by cochineal, when the fine, almost bacillus-like threads of the actinomycetes show themselves and thus establish the diagnosis.

The question which Virchow next proposes to solve is, Does pork containing actinomycetes cause disease in the human being, or is it innocuous? Thus far, Virchow knows but of one case, in which the disease was suspected to exist during life, where a hog seemed to be weak in the back and in general not to be well, and where, after its having been slaughtered, actinomycetes were discovered in its flesh. But, considering the importance of the subject, there can be no doubt that this question will be soon settled. How many car-loads of suspected pork may have been condemned and been dumped into the river because the pork was believed to contain trichinæ, while in fact there were no trichinæ, but actinomycetes?

That the interdict of the importation of American pork will be soon removed in Germany, we need not doubt. Since Virchow's report a great activity in the circles interested has been noted. That the whole question of trichinæ has entered a new phase also is certain, and we only hope that our country will contribute its share to these investigations, the importance of which cannot be overestimated.

H. E.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

THE Thirty-Fourth Annual Meeting of the Illinois State Medical Society was inaugurated at the First Methodist Church, in this city, May 20. About two hundred delegates and visitors were present, together with the usual number of persons interested in canvassing the profession in the interest of manufacturers of pharmaceutical preparations, surgical instruments, medical books, etc. The notable feature of the meeting was the address delivered by the President, Dr. Edmund Andrews. He touched lightly upon some unimportant matters relating to the rules for governing the Society, much the greater part of the paper being devoted to a consideration of the vexed question of ethics. The speaker said that all codes are imperfect, and the National Medical Code is not an exception. What medical men appear to want is not so much a better form of Code, as a better knowledge of the great principles underlying all codes. Neither ethics nor etiquette were created by medical societies. Ethics are the principles of morality, and are eternal, because founded on truth. Etiquette is the slow growth of social usages. Societies recognize and enforce these things, but they do not create them. Meanwhile, our disputes injure our honor before the community. The impression has gradually grown up, even in the very best circles, that physicians have an exceedingly artificial and complicated Code of Etiquette, which nobody but themselves can understand; that our system of usages has none of the gracious and genial flexibility of that form which prevails in general society, but is held with a cast-iron rigidity and is made to outrank the obligations even of morality and humanity. They generally believe that we will expel a man for a breach of etiquette sooner than for ignorance of his profession, neglect of his patients, or drunkenness on duty. We of the profession know, of course, that those charges are not true; yet there is just enough appearance of truth to give them a sting. Physicians indulge in foolish talk sometimes which half justifies these charges. There are men among us who do not seem to know the difference between ethics and etiquette. He said that a reputable and honest physician of this State had actually confessed that he did not know that ethical principles were laws of nature. He thought that they were created out of nothing but by the fiat of the American Medical Association, and had no authority or existence prior to their adoption by that body. That kind of ineffable nonsense shames us before the world. The old bores must die off. They could not plant in the minds of younger men those few main principles which constitute the substance of

all ethics above and of all useful etiquette below. The term ethics means morals. It comprises those grave eternal principles of right which bind all men in common, whatever their profession. Medical ethics are simply those same moral principles applied to medical conduct. The essential principles of medical ethics are three: 1, the physician must bring to his work a thorough knowledge of his profession; 2, he must use that knowledge diligently and honestly for the benefit of his patients; 3, he must shape all his conduct towards his patrons and his medical brethren in the spirit of honor, kindness, and generosity. There is, however, also a medical etiquette, and those who despise it ought to be taken back forty or fifty years and given a taste of the society of their predecessors. True, there were some kind, and even polished, physicians in those days, but there were others who could be characterized as nothing less than a herd of old centaurs cavorting over the corduroy roads, snorting aloud their contempt for each other. Conventional usages depended for their graciousness on an amount of flexibility and adaptation to circumstances, and demanded, for that reason, a measure of liberty. They varied with different localities, and changed with the passage of time. The rigid starch-bandage etiquette is an abomination despised by every true gentleman. That creation in general society which cramps its whole existence into forms, to which it devotes the whole of its little mind, is called a fop or a dude, and in medical circles it is the "*dudus medicus*." The centaurs are dead, and the "*dudes*" are educating themselves up to a chronic state of paralysis, where they would be equally harmless, but none the less exasperating.

The doctor is, however, a warm advocate of the Code of the American Medical Association.

There were several interesting papers read, a banquet at the Grand Pacific Hotel, and a select private entertainment to a limited number. The meeting proved quite a success, and adjourned to meet next year at Springfield, Illinois.

At the last meeting of the Alumni Association of Chicago Medical College, the Secretary stated that the Association numbered eight hundred and thirty-four, of whom sixty-six were deceased, almost half of this latter number having succumbed to phthisis. The other causes of death were enumerated under twenty heads. The mortality was one in twelve. The average age of those deceased was thirty years. M.

May 31, 1884.

DR. WILLIAM BARTON HOPKINS has been elected one of the Attending Surgeons, and Henry M. Fisher one of the Attending Physicians, to the Episcopal Hospital of Philadelphia.

WEST VIRGINIA.

AN invitation to be present at the annual meeting of the West Virginia State Medical Society at Clarksburg reached me just as the recent "hot spell" began to make life in the city uncomfortable and a vision of green hills and running streams especially agreeable to contemplate. Packing up a few necessary articles of wearing-apparel and a bottle of cholera medicine,—Clarksburg is a local-option town,—I reached my destination on May 21. The sessions of the Society were held on this and the succeeding day, and were moderately well attended. I was agreeably impressed with the superior knowledge and practical common sense of the physicians in attendance, who came from all parts of the State. It seemed rather curious, however, that the physicians of Clarksburg, with two or three exceptions, held aloof from the meeting.

The papers read and the discussions thereon reflect credit upon the participants, and the report of the Society's work at this meeting will make a creditable showing. I was particularly struck by the practical character of a therapeutic suggestion of Dr. Reeves, secretary of the State Board of Health. Discussing the treatment of typhoid fever, Dr. Reeves said he had of late rarely used quinine in this disease. Especially where the tongue is dry, red, and pointed, he abstains from its use, regarding it in these cases as a veritable toxic agent to the nervous system. In this condition he gives ergot internally, and, when the temperature is high, reduces it by cold applied to the *wrists*. He wraps a coil of rubber tubing around the wrists, and then passes a stream of ice-water constantly through the coil from the reservoir of a fountain-syringe. By this means the temperature of the body can be promptly and effectually reduced. He thinks the ergot diminishes the likelihood of intestinal hemorrhage and prevents the temperature rising as high as when it is omitted.

A lively discussion on diphtheria brought out the usual differences of opinion regarding the diagnosis, causation, and treatment of this disease. Dr. Carpenter, of Moorefield, related the history of an outbreak of the disease in his own family. Every one of eleven inmates of the house, himself included, was attacked. He attributed the outbreak to insanitary conditions produced by much decaying vegetable matter in a damp cellar. None of the family had been, to his knowledge, exposed to contagion. He thinks he observed a diminution in the virulence of the disease in those members of his family who had taken a solution of quinine, chlorate of potassium, and tincture of iron as a prophylactic.

An interesting paper was read by Dr. Fleming Howell, of Clarksburg, who de-

scribed a case of cesophagotomy for the removal of a silver fifty-cent piece. The operation was successful, and the patient recovered.

In a paper, *à propos* of a recent communication by Dr. Thomas to the New York Academy of Medicine, on "Listerism in Obstetrics," Dr. Sharp, of Volcano, took the position that, in rural practice at all events, cleanliness and common sense were the only needed antiseptics and prophylactics against puerperal diseases.

On invitation of Dr. W. J. Bland, the superintendent of the West Virginia Insane Asylum at Weston, I visited that institution after adjournment of the Society. The asylum is large and well built, and has comfortable accommodations for over six hundred patients. It is now pretty well filled, though seemingly not overcrowded. The rooms, halls, and furniture were neat and clean. The water-supply is abundant, and each hall has lavatories, baths, and water-closets. The patients seemed all cleanly in their habits. All the water-closets I examined are of the Jennings pattern and were in good condition. A defect in the water-supply of the closets is that the water is taken directly from the common water-supply. The sewage and all waste and storm water are carried off by an independent conduit, which empties into the north fork of the Monongahela, about a mile distant from the buildings. The only objection to the sewage is the large size of the pipes and main sewer, which allows decomposition and the formation of sewer-gas.

The system of ventilation is elaborate, but defective, although defects are being gradually removed under the intelligent direction of the engineer, Mr. Clifton.

The heating-arrangements are admirable, with the single grave defect that the air passing through the coil-boxes to be heated is taken from the basement, instead of being taken from without the building. This defect will soon be removed, however.

The kitchen, bakery, and laundry are separated entirely from the hospital. The building is lighted with gas, which is manufactured in the institution.

The inmates are kept employed as much as possible, but it seemed to me that too many were kept under mechanical restraint. It is true I saw less than a dozen in strait-waistcoats or bracelets, but there were, I thought, just that number too many.

Altogether, however, the institution seems to be well conducted, and reflects credit upon the State of West Virginia, its liberal board of trustees, and its competent medical and administrative staff. There are few States that make better provision for this unfortunate class of the population.

CORSAIR.

CLARKSBURG, W. VA., May 23, 1884.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

THURSDAY, MAY 1, 1884.

The President, R. A. CLEEMANN, M.D., in the chair.

DR. HENRY BEATES, JR., read a report of a case of

CYSTIC LEIOMYOMA UTERI

the fluid of which contained the Drysdale corpuscle and other characteristics of typical ovarian cystoma. The early history of this case, owing to the inability of the patient to state with precision a few minor details, is somewhat incomplete, yet sufficient accuracy is available to supply a clear, unequivocal clinical record and distinctly demonstrate that the Drysdale corpuscle, where found in considerable number in fluid derived from the abdominal cavity, is not pathognomonic of cystoma ovarii.

Mrs. L., æt. 51, housewife, a mother, noticed, four years prior to admission to the Philadelphia Lying-in Charity Hospital, a lump in the lower abdominal region. The menopause had not yet occurred. The tumor was round, painless, and occasioned no inconvenience. Its development was comparatively slow, and not until it had attained large dimensions did it occasion constitutional derangement. When admitted, the patient was markedly asthenic, and suffered from mechanical dyspnoea, gastric irritability, subacute proctitis, and pyrexia; the temperature ranged from 99° to 100.5°.

The facies ovariana, and the peculiar atrophy of the soft tissues of the supra-thoracic region, so constantly attendant upon ovarian cystoma, were present in a conspicuous degree. The notes of measurement were unfortunately lost, but an estimate of the size can be formed when it is remarked that the tumor completely occupied the abdominal cavity, everting the xiphoid cartilage and inferior ribs, bulging far over the lumbar regions, and extending over the pubes down and between the thighs. The circumference at its largest portion was about fifty-one inches. The superficial abdominal veins were conspicuous, and the cellular tissue, from the mammary zone to the feet, very oedematous. Palpation and percussion detected and revealed signs of ovarian cyst. The fluctuation was more perceptible in the longitudinal than in the transverse diameter. In the sub-hepatic region a decided resistance to pressure was noticeable, dependent upon a thickening of the cyst-wall. This mass was attached to the liver at the outer two-thirds of the inferior border. At the inner third there intervened a space which emitted a percussion-tympany, the note being that of colic resonance. The urine afforded

negative evidence. As the asthenia was so profound, it was deemed advisable to tap the cyst in order to obtain an opportunity of improving the general strength and rendering ovariectomy bearable.

Dr. Albert H. Smith, who had charge of the case, tapped (employing the ordinary curved trocar and canula used in tapping per curiam the urinary bladder), and withdrew twenty-seven pints of a dark, muddy-brown, grumous fluid, possessing a neutral reaction, sp. gr. 1.018, and containing blood and paralbumen. Microscopically, I found red blood-corpuscles, leucocytes, endothelium in various degrees of retrograde metamorphosis, *i.e.*, the corpuscles of Bennett, Nunn, and Glugé, the ovarian cell of Drysdale, cholesterine, and amorphous detritus. It did not coagulate spontaneously. These micro-chemical properties, coupled with the physical signs, determined a diagnosis of ovarian cyst. The grumous character of the fluid and the existence of the sub-hepatic mass inclined to the belief that we were dealing with a cyst in which carcinosis had become established, and that either metastasis to the liver had occurred, or there co-existed carcinoma hepatis. The idea of ovariectomy was abandoned, and analepsis instituted, with the effect of improving the general condition sufficiently to enable her to be removed to her home, where she remained under the care of Dr. L. Brewer Hall. In about five months the tumor had refilled, and during my absence Prof. James B. Walker, at Dr. Hall's request, tapped the second time. The fluid was clear, and presented the appearance of ovarian fluid. In the winter of 1882, I tapped a third time, employing an aspirator. The gentleman assisting me inadvertently applied the exit-nozzle of the air-pump to the vacuum-jar, and when the trocar was introduced there occurred an inflation of the cyst. The air apparently inflated a series of variously-sized cysts, that were arranged circumferentially and emitted percussion-notes of different pitch. From this circumstance, which occasioned no evil consequences, we concluded that there existed a number of small cysts communicating with the principal. As the evacuation of the fluid progressed, the umbilical region sank in, disclosing a circumferential mass, presenting the appearance of a wreath, as it were, underlying the abdominal parietes. This ridge could be firmly grasped and moved to a limited extent. This peculiarity determined me to examine the fluid carefully. I also had Dr. Formad examine it, and he pronounced it ovarian. The class at the University of Pennsylvania was supplied, and the ovarian cell of Drysdale demonstrated. The cyst refilled more rapidly, and I tapped a fourth time, removing a large bucketful of clear fluid, containing the same corpuscle in greater number than the previous specimens; large flakes of coagulated lymph were also

evacuated. The circumferential mass had undergone great development, as had also the sub-hepatic induration. The re-accumulation of fluid was more rapid, and the deterioration of health steadily progressing. Death terminated suffering about six years after the first manifestations. During the last days of the patient's life, Prof. Walker, in the absence of Dr. Hall, was in attendance. His letter details the mode of death and the results of the autopsy:

"Mrs. L. died on the Sunday night after your departure. Her bowel-trouble rapidly disappeared, but the symptoms of cerebral anæmia deepened, with hallucinations and convulsions, until death.

"At the autopsy the tumor was found to have membranous walls over an area of nine square inches above the navel, in the middle line; elsewhere the cyst-wall was thick, as per sample. In some localities, notably in the hypochondria, the wall was quite thick. Firm attachments existed over the anterior wall of the sac with the parietal peritoneum, and the intestines were carried far up under the liver and stomach and were attached to the tumor. The liver was also attached. The entire abdominal cavity was occupied with the tumor, and it dipped into and occupied the pelvis. No attachments existed at the sides, or behind. The uterus was forced downward. One ovary, the right, was normal, and attached loosely to the pelvic brim. The other is presumably occupied by the tumor. The cavity of the tumor was occupied by a brownish gelatinous fluid resembling soft soap. It was transparent, but had a sediment consisting of detritus from the inner wall of the sac. There was but one cyst, and the entire interior was similar in its lining, being apparently undergoing erosion. The contents of the cyst measured over a Yankee bucketful. As the tumor was too immense to even contemplate removal, and as the variably thick wall was everywhere similar save in the pelvic portion, which was darkened from hypostatic congestion, I removed the uterus and the portion of the tumor immediately surrounding it, extending the section through the cyst-wall." (This specimen was presented to the Society.)

Sections for microscopic study were prepared from different portions of the cyst-wall, and were all demonstrative of leiomyoma. Those from the sub-hepatic portion resembled spindle-celled sarcoma, but were clearly differentiated by the elongated nuclei and want of sarcomatous relationship of cells to capillaries. The identity of the clinical phenomena of this neoplasm with those of ovarian cyst is a matter of special attention. In the early stage a marked peculiarity consisted of the sub-hepatic enlargement and induration; a morbid resistance to pressure, noticed in the inferior lumbar regions after the first tapping and attributed to the œdema, is now seen to have depended upon a thickening wall, which

at that time was insufficiently developed, save in the hepatic region, to attract special attention. That all doubt regarding the nature of this neoplasm may be removed, attention is directed to the left ovary, which has undergone marked atrophy, and is to be seen in the specimen. I submitted some sections to Dr. Formad, who pronounced them ovarian. The origin of the cyst from the fundus uteri is evident upon examination. With the facts before us, I think it is conclusively proved that the ovarian corpuscle of Drysdale, while a valuable aid to diagnosis, does certainly not possess pathognomonic value.

Dr. DRYSDALE regretted that Dr. Beates had not sent him a specimen of the fluid removed from this tumor, especially as he had more than one opportunity of doing so. While having the highest regard for the opinion of the gentlemen who examined it, still, so many errors had been made in these investigations that it would have been a satisfaction to him to have examined it himself. But, apart from this regret, he considered it by no means proved that the cyst in question was not ovarian. The portion of tumor left attached to the uterine wall in the specimen resembled a closely adherent ovarian cyst, such as he had met with repeatedly. The little mass lying close to the uterus, described as an atrophied ovary, did not present any resemblance to an ovary, nor did it occupy the usual position of that body. In the description no reference had been made to the color of the tumor, which has an important diagnostic value, the uterine fibro-cyst being usually livid or purplish in color, while the ovarian had a white pearly hue. It was especially in cases like that of fibro-cyst of the uterus where the importance of the ovarian cell in diagnosis was well marked. In his investigation of these tumors he had never met with the cell which he had described as ovarian. Mistakes were very easily made in the differential diagnosis of such tumors, and in fact in many cases the diagnosis could not be established except by the examination of the fluid or by opening the abdomen. For want of this examination of the fluid he had seen Spencer Wells make the abdominal section to remove a tumor which he had diagnosed as ovarian, but which proved to be uterine. Dr. Marion Sims had sent him on three different occasions, and without telling him that they were from the same patient, specimens of a fluid which he thought was ovarian, obtained from a cyst in the abdomen. Dr. Drysdale assured him that the fluid was not ovarian; but after the examination of the last specimen, Dr. Sims, still doubting, determined to operate, and found a uterine fibro-cyst. The history and all the characteristics of the tumor described this evening were ovarian, and the specimen and autopsy were not sufficient to establish the diagnosis of uterine cyst.

Dr. B. F. BAER remarked that the speci-

men seemed to be a section of a fibroma arising from the uterus, but it is too small to be satisfactory, or to prove its origin. His personal experience had taught him the diagnostic value of the Drysdale corpuscle. When Dr. Formad reports finding this cell in the fluid removed from an abdominal tumor, he feels strengthened in his diagnosis of ovarian cyst. He has not trusted to the cell alone, but has been greatly influenced by its presence or absence in making up a diagnosis in doubtful cases. In every instance in which Dr. Formad had reported finding the ovarian cell, operation had proved the tumor to be of ovarian origin. He would like to ask Dr. Drysdale if he still considers the cell pathognomonic.

Dr. DRYSDALE still believed in the pathognomonic value of the ovarian cell. In his investigations he had met with but one exception to the rule, and that was in renal cysts. To prove that the cell could be relied on to establish a diagnosis, he would give one or two instances where it was impossible to do this except by its aid. In a review by Dr. Harris of the "Transactions of the American Gynecological Society" in the *American Journal of the Medical Sciences* will be found this statement: "On one occasion Prof. D. Hayes Agnew gave Dr. Drysdale a fluid for examination in which he found the characteristic cell. Upon stating what he had found to Dr. Agnew, he was told that the fluid had been taken from the abdominal cavity, upon which he immediately said that the fluid must have escaped from an ovarian cyst, for it was ovarian. In this he was correct, as the cyst had a small hole in it, as if made with a punch, and the fluid had escaped as claimed." In another case Dr. Drysdale received a letter from Prof. Matthew D. Mann, of Buffalo, New York, with a specimen of fluid consisting of eight or ten drops which the doctor stated was all that he could obtain by aspiration. The tumor had been diagnosed by other surgeons as one of uterine fibroma, and consisted of a large solid mass which filled the pelvis and abdomen as high as the umbilicus. The history and symptoms all pointed to a uterine fibroid, and the patient was in such a precarious condition that an exploratory operation was considered unjustifiable. An examination of the fluid by Dr. Drysdale showed the presence of the ovarian cell. This determined Dr. Mann to operate. He found two ovarian tumors, which he removed successfully, and the patient recovered. "Without the microscope no certain diagnosis could have been made, except by resorting to an exploratory incision." These cases—and he could give many others like them—were sufficient to show the diagnostic value of the cell.

Dr. BEATES remarked that it was a matter of extreme regret to him that Dr. Drysdale did not have an opportunity of examining the

fluid: it was due to the fact that the neoplasm was regarded as ovarian, and the specimens of fluid were not preserved. At the autopsy, the growth was presumed to have arisen from the left ovary, and none of the fluid was kept. Later study of the specimen disclosed the amygdaloid mass situated in an atrophied membranous structure, closely approximated to the uterus. The microscopic examination of this determined its ovarian character to the mind of Dr. Formad, which conclusion dissipated a doubt in his mind and confirmed his belief of its being the left ovary. He thoroughly appreciated the strong probability of error liable to occur in positively diagnosing by differentiation the Drysdale corpuscle from similar bodies, as the pyoid body of Lébert, but the facts that treatment with acetic acid only had the effect of rendering the whole corpuscle very slightly clearer and disclosed no nucleus, and that ether added to the fluid and the mixture thoroughly agitated for several minutes had the effect of simply rendering the corpuscle paler, had convinced him that the bodies were the corpuscles in question. There is, by very extended experience, developed a capacity to differentiate by a varying degree of opacity. Dr. Formad believed these corpuscles to be those of Drysdale. The striking phenomenon, if this be an ovarian cyst, is in the fact that primarily it was purely cystic, typically so, and that during the last year of its existence the cyst-wall throughout its posterior seven-eighths assumed a myomatous development. If this did not occur, the myomatous wall must have originated at the fundus uteri and gradually permeated the cyst. Either of these processes is almost incredible, and certainly exceptional to known clinical facts. The true uterine origin must not be forgotten. That a proper conception of the tumor may be formed, it should be compared to a large pumpkin with a wall varying in thickness from one to three inches. For an area of about nine square inches at the umbilical region the ordinary cyst-like structure formed as it were a drum-head. This wall is not fibromatous, but purely myomatous. Dr. Goodell had seen this patient and diagnosed the tumor to be ovarian.

Dr. B. F. BAER exhibited a specimen of

HYPERTROPHIED UTERINE MUCOUS MEMBRANE.

R. H., æt. 30, married twelve years, sterile; puberty occurred at the age of twelve; slight dysmenorrhœa from the first, and since her marriage the difficulty has been increasing, so that during the last few years the pain has been very severe. The menstrual flow, which had always been rather profuse, especially since her marriage, has for more than a year been irregular in time and quantity; sometimes it continues two weeks very freely, when she is so prostrated as to be compelled to remain in bed to regain strength. She com-

OLEATES.

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plained of a severe, sharp pain in the region of the left ovary, radiating to the groin and anterior part of the thigh, and to the præcordial region and side of the head to the top-head. She had great dragging in the pelvic and pain in the sacral region. During her periods the mammary glands would swell and become very tender and sore. Coition had been rendered almost intolerable on account of pain during the act, and because it increased the pain in the left ovarian region and induced a sensation of nausea and faintness. She had such dread of sexual congress that an interval of months would sometimes elapse between the acts. Her weight had decreased from one hundred and forty-six to one hundred and seventeen pounds, and her appetite and digestion were poor.

Examination showed the cervix uteri to be near the vaginal orifice, somewhat elongated and conical. The os was patulous, the body of the uterus very much hypertrophied and retroverted. The left broad ligament was contracted and the corresponding ovary prolapsed, larger than normal, and very tender to pressure. The sound indicated a uterine depth of three and a half inches, and the cavity was large and soft. The organ was mobile. Ether was administered, the cervix dilated by means of Ellinger's dilator, and the endometrium was carefully curetted, removing a large amount of the most enormously hypertrophied mucous membrane. Nitric acid was applied. Under a regulated diet, with rest, complete relief followed, with freedom from hemorrhage and pain.

Dr. W. H. PARISH would like to hear the result in Dr. Baer's case after the lapse of three or four years. Two or three years ago, he had reported before this Society a similar case, in which, after dilatation by spongetents, he had removed a large quantity of endometric growths and applied nitric acid. The treatment was followed by an apparent cure, which lasted for some months, after the lapse of which the previous condition returned. The same treatment, followed by relief and subsequent relapse, has been repeated several times. Good microscopists have pronounced the growths benign. Dr. Goodell has, however, given it as his opinion that it will ultimately become malignant. Dr. Parish has been gradually coming to the same opinion.

Dr. BEATES has treated a woman, æt. 33 years, who suffers from ante flexion of the uterus, menorrhagia, and granulations of the endometrium. The microscopic appearance is benign. After treatment by means of the curette and nitric acid, no hemorrhage occurred for four months; the treatment was repeated, a laceration of the cervix was closed, and seven months later the patient became pregnant; abortion occurred at two and a half months, and the granulations and hemorrhages have returned.

Dr. BAER remarked that these cases are very common; they are seen every week at the clinic. They are usually benign, but sometimes become malignant from loss of blood and a run-down condition of the system. Adhesions or some other obstacle to the free return of the venous blood from the uterus may exist, or the ovaries may be diseased, and these causes will bring on the relapse, no matter how perfect the relief may be. In many cases the cause is flexion, the effect is sterility. It is an exaggeration of a purely physiological process. It may be benign in its incipency, but may become malignant later on.

W. H. H. GITHENS,
Secretary.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, APRIL 25, 1884.

The PRESIDENT, HENRY BEATES, JR., M.D., in the chair.

DR. HANNAH T. CROASDALE reported a case of "Vesico-Vaginal Fistule with Inverted Bladder."

The record which is brought to your notice this evening is that of a case which perhaps is possessed of more than ordinary interest from two circumstances: first, from the enormous size of the opening in the septum; and, secondly, from the fact that from the orifice a bright round body protruded, which was discovered to be the bladder inverted. The patient, M. F., æt. 47, was admitted to the Woman's Hospital, October 11, 1881. She was married at the age of 25, and had one child still-born. The labor was instrumental, and incontinence of urine occurred soon after it.

For this trouble and great discomfort the woman never sought relief, and speaks only of her present suffering having begun one year before admission. This suffering had been so intense that she had been obliged to keep her bed for this length of time. The journey from her home had been made on a bed. Her appearance was deplorable. She had constant pain in the lower part of the abdomen, bowels were constipated, appetite poor, face anxious, and she was constantly distressed lest the bed or her clothing be moved and thereby her sufferings be increased. It seemed almost hopeless to expect to do anything for the poor woman's relief, so disturbed was her health from her desperate condition.

Nausea and vomiting were almost constantly present. Her pulse on the day following that of her admission was 65, temperature 99°, and respiration 26. The quantity of urine in twenty-four hours could not be ascertained. The color was pale yellow, specific gravity 1002, reaction alkaline, and there was a trace of albumen. After ineffectual attempts, she was finally etherized and thoroughly examined October 29.

The tumor which was so exquisitely sensitive was the inverted bladder, and the exposed mucous membrane was greatly inflamed, and bled readily on being touched. The openings into both ureters could be distinctly seen. The mass was grasped and by gentle taxis was reduced, and retained by the slight support afforded by one of Skene's glass stylets, made to pass through the urethra with the distal extremity resting on the upper edge of the fistulous opening. A vaginal glass plug was introduced into the vagina to aid in supporting the bladder. The inflamed condition of the parts forbade any further procedure at this time.

On the 30th of November she was again etherized, and placed in the lithotomy position, and the edge of the fistule, which was about five centimetres in diameter, was carefully pared, bevelled from the vesical margin, giving a broad surface on the vaginal septum, and twelve sutures of silver were introduced. It was necessary, before closing the fistule, to liberate adhesive bands at either angle, and then the margins of the opening were closed by the sutures and secured by perforated shot. A self-retaining catheter was introduced, to which was attached a piece of rubber tubing for conveying the urine to the urinal. The patient was then placed in bed, and one-sixth of a grain of morphia sulphate given hypodermatically, and she was ordered lime-water and milk every two hours.

The following day, December 2, there was much vesical tenesmus, which gradually subsided, and nothing especially worthy of note occurred until December 7, when the sutures were removed. Union was not perfect at either angle, and in the centre there was a small orifice which admitted the passage of urine.

January 6, the patient was again etherized, the edges of the three minute openings freshened, and fine silver-wire suture introduced. The central and right openings promptly closed after this second operation, but the left, just at the site of the ureter, admitted the passage of a Snelling's probe.

Then, January 20, February 3, and March 28, I operated, hoping to close this minute orifice which still remained, and which still allowed of the passage of urine when the bladder was filled. Not one of these efforts was followed by any better success. These attempts were always made with a probe carried through the urethra into the opening in the ureter, in order to prevent wounding or closing the latter.

It was now thought best to send the patient home and encourage her coming again in the autumn, as her stay had already been much prolonged beyond the usual time for keeping patients in the hospital, and she was discharged May 8, 1882, quite content on her part with the result of the many operations, —six in all. After several months, however,

the urine ceased to pass through this opening, probably from the contraction of cicatricial tissue.

I find many contributions to the surgical literature for the relief of vesico-vaginal fistule, but nowhere have I found any record of a case of an inverted bladder through the fistulous orifice.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 23, 1884.

The PRESIDENT, Dr. JAMES TYSON, in the chair.

A case of Paget's disease. Presented by Dr. W. G. MACCONNELL for Dr. JOSEPH HEARN.

THIS breast was removed at the Jefferson College clinic by Dr. Hearn, Saturday, May 17, 1884.

History.—Mrs. B., aged 39 years, had been married for nineteen years, and had borne four children and had had one miscarriage. No other member of her family had ever suffered from any form of tumor. Four years ago, following a pustular eruption which she noticed on her abdomen, a lump was observed in the left breast, which was the seat of a lancinating pain of an intermittent character. Previous to the discovery of the lump an eruption of an eczematous nature was noticed. It had existed some seven or eight months before she noticed the lump. The nipple, at the time of the operation, was thoroughly retracted,—indeed, had melted away. There was no axillary involvement, although there was noticed a gland at the upper and inner quadrant of the breast. On section of the tumor, after its removal, several small nodules, of a hard, fibrous consistence, were encountered. Microscopically I found them to be the site of carcinoma of a scirrhus nature. The gland revealed a similar condition.

Colloid carcinoma.

This tumor was removed by Dr. Hearn, at the Jefferson Medical Hospital, about one week previous to the removal of the other breast.

History.—Miss B., æt. 67, general health good, family history that of phthisis. No other member of her family had ever suffered from any form of tumor. About three years ago she felt a lancinating pain in the right breast. On examination, she found a lump which was hard, roundish, and about the size of an English walnut. It constantly tended to increase. At the end of eighteen months, it had attained the size of an egg. She then resorted to a quack, who applied a salve, which she states caused some bleeding. Two months before her admission to the hospital, she states that the breast began to

gather, and one week previous to the operation it broke, and a dark-greenish fluid escaped, which was afterwards followed by the extrusion of a mass of greenish-colored sloughs. The growth was attached to the overlying skin, but not to the pectoral tissues beneath. The subcutaneous veins were enlarged and prominent. No glandular involvement existed. On section, the tumor was found to be densely hard, and the seat of small cavities filled with a glairy, gelatinous, semi-solid fluid. Microscopic examination showed alveoli filled with epithelium that had undergone fatty degeneration, not a few of them showing the peculiar laminated appearance peculiar to colloid. The connective tissue of the stroma was in a state of active proliferation, due probably to the inflammation resulting from the cystic change already mentioned.

Sarcoma of the testicle. Presented by Dr. G. DE SCHWEINITZ.

This growth was removed from S. H., aged 37, married, a patient of Dr. John Ashhurst in the surgical ward of the University Hospital. His father and mother are living and in good health. His grandparents died in old age, having led healthy lives. Of his two brothers and two sisters, all are living, and three of them have been thus far in good physical condition. One sister had a growth removed from the orbit, probably a sarcoma, which is now beginning to recur. His own health has been good. He denies any venereal disease. Two and a half years ago he first began to notice a globular swelling at the bottom of the left testicle, which gradually increased in size until eight months ago, since which time the growth has been rapid, so that at the time of operation the circumference of the testicle measured fourteen and a half inches. Pain has been insignificant until last April, since which time he has suffered with severe dragging pains. The inguinal glands on both sides were slightly enlarged. The growth occupies the body of the testis, being surrounded by the tunica albuginea and tunica vaginalis, which are intact. It is a large, somewhat irregular, moderately soft, blood-stained mass. In one end there is an area of cystic degeneration. Microscopic examination shows this tumor to be a sarcoma of the round-cell variety, the cells being moderately large, containing oval nuclei and sometimes nucleoli. In places a faint reticular net-work is demonstrable, producing a picture similar to the lymph-gland-like round-cell sarcomas.

THE PREVENTION OF BED-SORES.—A solution of gutta-percha in chloroform (four to thirty) is useful to protect the skin over projecting bones and to prevent bed-sores in wasting diseases.

REVIEWS AND BOOK NOTICES.

A HAND-BOOK OF THERAPEUTICS. By SIDNEY RINGER, M.D. Tenth Edition. New York, William Wood & Co., 1883. 8vo, cloth, pp. 688.

The present edition of Ringer's Hand-Book has been carefully revised, and has received many valuable additions. In the first part there has been inserted a brief account of the symptoms of disease, with sections on the tongue, the pulse, the skin, the temperature of health and disease, chronic fever, and dropsy; which is followed by a consideration of various therapeutic expedients,—the different varieties of baths, poultices, and fomentations, the uses of ice, spinal ice-bag and hot-water bag, the medical uses of water, enemata, acupuncture, and counter-irritation. This occupies about one-fifth of the work, the remainder being devoted to a consideration of the various articles and groups composing the *Materia Medica*.

This work is cyclopædic as regards the effects, physiological and therapeutical, of remedies; but its wealth of material has compelled in some places a baldness of statement which might be misleading to a new beginner. For instance, the following appears on page 91: "Rheumatic fever with other complications generally ends favorably, no matter how serious the aspect of the patient. Pneumonia, even when double and further complicated with extensive pericarditis, seldom destroys a patient." Such statements from an acknowledged authority are too apt to beget a false confidence in the student, and an underestimation of the responsibilities of the practice of medicine. We should also consider the following as dangerous doctrine to inculcate (p. 358): "A little rum and milk an hour before rising is a good prop to town-living women, to whom dressing is a great fatigue, who, without appetite for breakfast, suffer from morning languor and exhaustion, often lasting till mid-day." This condition we should be more apt to consider the result of secret indulgence in spirits than as a warrant for using them. It is just such patients, however, that are most eager to have their physicians prescribe stimulants, as an excuse for continued self-indulgence.

It may seem invidious to attempt to offer criticism upon a work the popularity of which has demonstrated its application to the wants of the practitioner; but, while fully acknowledging its usefulness and worth, we recognize an apparent disposition to pay too great attention to symptoms, without due regard for the accompanying pathological conditions,—with perhaps too much of a tendency to look upon certain phenomena as constituting "indications" for certain drugs. To our mind, Nature never "indicates" remedies; if she did, the practice of medicine would resolve

itself into the application of specifics. The true principle of therapeutics would rather seem to be to determine in what manner Nature might effect a cure, and then to select from a number of remedies the one in particular which is best adapted to favor this end in the speediest, most agreeable and skilful manner. As an illustration of what we mean, we take at random (from page 166). Speaking of nervous subjects, subject to despondency and bad dreams, the author says that "this condition often arises from overwork, grief, worry, or too long residence in town, or want of a change.

"The bromide of potassium will always cure this group of symptoms. Their occurrence, independently or associated with other illnesses, as the change of life or migraine (sick headache, nervous sick headache, bilious headache), is a distinct indication to give the bromide." One would think that the indication, if correctly interpreted, would be to supply the desired change of scene or to break into the monotony of town life by a trip to the country.

In short, there is too much reliance displayed upon the pharmacological management of a disorder, and too little intimation given that there is also great need of moral and psychic control. Good medical advice should include both of these factors. The great Dr. Rush never neglected to enlist his patient's intelligent interest in the effects of his remedies, and he did not hesitate to ascribe much of his success to this fact. It is an evidence of knowledge to select the appropriate drug for the "indication;" but it is an evidence of wisdom to obtain the same effect, if possible, without the aid of the drug.

F. W.

TRAITÉ DE L'AFFECTION CALCULEUSE DU FOIE. Par le Docteur JULES CYR, Médecin Inspecteur adjoint à Vichy. Small 8vo, pp. 345. Paris, V. Delahaye et Lecrosnier, 1884.

(A CLINICAL TREATISE ON GALL-STONES.)

The author, well known by his writings on diabetes and on diseases of the liver, and by his translation of Murchison, has embodied in the present compact volume the results of his experience in those disorders which give rise to, or result from, biliary calculi. Engaged in the practice of medicine at Vichy, he has had peculiar opportunities for the observation of disorders of this kind, and his work, which claims to be rather a monograph than a systematic review of the actual state of science in this field, reflects on every page close observation and large experience. In this respect it possesses for the reader a charm such as no mere compilation, however excellent, can afford.

Looking at his subject from the clinical stand-point, the author passes rapidly over the chemistry and physics to dwell with fulness

upon the etiology and pathogenesis, the symptomatology, the diagnosis and prognosis, the course, duration, complications, and terminations of the group of disorders indicated by the comprehensive but scarcely translatable term, *L'Affection calculeuse du Foie*. Singular skill is displayed in the treatment of the subject, which advances, so to speak, in two columns,—one relating to the causative conditions, the chronic state, the other to the active results, the acute outbreaks.

But that part of the book devoted to the treatment will be read by the practitioner with especial interest, and will well repay perusal. The hygienic necessities of persons liable to the formation of biliary calculi are fully set forth, and minute directions are given as to diet, drink, and exercise.

Under the head of the medical treatment proper, the author expresses a well-founded preference for the treatment of these cases at Vichy. Alas! how many of the faithful never reach Mecca! We would fain review rather than thus briefly notice this book, were space at our disposal. It is a pleasure to commend it as a terse, well-written, practical monograph upon the subject, which would be welcomed by the profession in an English version.

J. C. W.

GRUNDZÜGE EINER PATHOLOGIE UND THERAPIE DER NAREN-, MUND- UND KEHLKOPFKRANKHEITEN FÜR AERZTEN UND STUDENTEN. Von Dr. MAXIMILIAN BRUGEN. 8vo, pp. 272. One Hundred and Fifty-Six Illustrations. Leipsic, Urban & Schwarzenberg, 1884.

The author, who is almost as well known on this side of the Atlantic as he is in Europe, through his many valuable contributions to the literature of laryngology, has embodied in the volume before us the result of his extensive experience in the treatment of diseases of the upper air-passages, and has given us a book which must be ranked among the best of those which have been lately written on the subject of which it treats.

It opens with a consideration of the anatomy and physiology of the nasal, aural, and laryngeal cavities and their appendages, and we find in these chapters many details which are valuable and suggestive and which are not to be found in the larger text-books on anatomy and physiology.

The second part comprises a full and detailed description of the instruments employed in laryngoscopy and rhinoscopy, and of the method of using them in the examination of the larynx and nasal cavities, and in the treatment of diseases affecting these cavities.

The third part discusses the general and local therapeutics as applied in the treatment of the diseases of the throat and nose, while the remaining portion of the book is devoted to a consideration of the different diseases affecting the upper air-passages.

As an appendix, we find a most complete bibliography of books and pamphlets on the subject, comprising over three hundred titles.

The illustrations, most of which are reproductions of cuts from other works, are nevertheless well selected and admirably executed, giving the work double value on account of the clearness with which they illustrate the text. The style, although generally clear and to the point, is in some instances involved, and it becomes difficult to fathom the exact meaning of the sentence. This, however, is a fault, perhaps, not so much of the author as it is of the language in which it is written.

C. S.

ELEMENTARY PRINCIPLES OF ELECTRO-THERAPEUTICS FOR STUDENTS AND PHYSICIANS. 8vo, pp. xviii, 426. McIntosh Galvanic and Faradic Battery Co., Chicago, 1884.

This company makes a battery, galvanic, faradic, or static, which is reliable. Their accessories are equally good, and to these is now added a treatise of worth to all who employ electricity in practice. The method of discussing fundamental points in electrophysics is novel and good, the description of the mechanics of batteries is unusually clear, and the two are fully illustrated by excellent engravings. The indications for the use of either current are well defined, and the motor points are more clearly shown in the diagrams than in any previous work. As a rule, the references in special applications are to good authority, but we miss many which are superior and which should have been included by the compiler, as the literature of electro-therapeutics has been quite full for a year or two past. As a whole, the book is readable, precise, and a safe guide to inquirers. It is handsomely got up in type, paper, and binding, and will repay its cost to any purchaser.

W. R. D. B.

GLEANINGS FROM EXCHANGES.

REMARKABLE RESULTS FROM IODOFORM APPLICATIONS IN ERYSIPELAS.—In the *Practitioner* for May, 1884, is a communication from Dr. C. Clark Burman, in which the topical application of iodoform in collodion (one to ten) in facial erysipelas is praised very highly. Four cases are reported in which the good effects of painting the affected surface and a little beyond with the iodoform were remarkably manifested. The relief to the pain and burning was almost immediate, and the inflammation in the affected area rapidly subsided: in short, the application is cooling, relieves pain, and apparently rapidly arrests the disease. The disadvantages of temporary disfigurement, and of the odor, are very slight in comparison with its good effects. Tincture of iron was given internally in three

of the cases, but in the fourth no internal treatment was given beyond a dose of sulphate of magnesia, yet by the next day after the use of the iodoform the erysipelas had subsided.

GASTROTOMY OR GASTROSTOMY.—Under the heading of "Gastrotomy," a case is reported in the *British Medical Journal*, in which Mr. Knowsley Thornton removed a mass of hair from the stomach of a young girl by direct incision, closing both the superficial and deep wounds by interrupted and continuous silk sutures, with rapid healing. The term gastrotomy is evidently misapplied here: probably it is a misprint, since it is intended to imply, as originally suggested by Prof. John Ashhurst, of this city, the establishment of a gastric fistula for the purpose of supplying nourishment to the patient, thus forming an artificial "os,"—"gastrostomy" for this purpose becoming "gastrostomy."

MISCELLANY.

TESTIMONIAL TO PROF. STILLÉ.—The profession of Philadelphia recently tendered to Prof. Alfred Stillé the honor of a public dinner in commemoration of his retiring from the chair of Practice of Medicine in the Medical Department of the University of Pennsylvania. The dinner was given at the Hotel Bellevue on the 5th instant,—a little later than at first intended, on account of the lamented death of Prof. Gross, who was expected to preside. The chair was actually filled by Prof. Da Costa, by invitation of the committee in charge, to whom great credit is due for the perfection of the arrangements.

At the close of an elaborate repast, letters were read from absentees regretting inability to attend, and expressing sympathy with the object of the meeting. Among these were communications from Drs. H. I. Bowditch, Oliver Wendell Holmes, S. G. Moses, John L. Atlee, and Edward Hartshorne. Among the guests in attendance from other cities were Drs. Austin Flint, of New York, George C. Shattuck, of Boston, J. S. Billings, of Washington, and Traill Green, of Easton. The table was beautifully decorated, and was set in the shape of half a parallelogram, with an additional arm down the centre. Covers were laid for seventy-seven, and nearly every seat was occupied.

Prof. Da Costa delivered the opening address in a few appropriate remarks that were received with evident approval. He regretted the absence of the master-mind to whom by common consent had been assigned the agreeable task of presiding,—for a great man befits a great occasion. Then, addressing himself to the honored guest of the evening, he said,—

"In truth, it is a great occasion which calls

us together. When, at the end of a long and distinguished career, those who have labored with or alongside of a man, who have been his pupils, his associates, his colleagues, have striven for the same offices, have vied with him in generous rivalry, voluntarily meet to testify their friendship and to mark their approbation of his life, it is, indeed, a memorable event, not only to him, but to his calling. And we are giving all that we have to give. We cannot bestow on you an order of merit, such as a government in some countries might bestow. No ribbon of the Bath, no ensign of the Legion of Honor, no Iron Cross, can be placed on your breast. Nor can we crown you with a civic crown, with its appropriate inscription *ob civis servatos*. Yet your crown of triple oak, accorded to you now by the representatives of your own profession for a life of valuable services, will be no less a mark of pre-eminence because it will have to rest invisibly on your brow.

"It is difficult, in your presence, to speak of the title you have to this and other distinctions without appearing to violate the canons of good taste. But you must look upon yourself as being with us on an occasion in which your claims are being summed up at the bar of American medicine,—claims not alone for to-day, but for posterity, and in which the advocate may plead more earnestly because he feels the consciousness of an assured verdict."

Next, passing in review the various fields in which Dr. Stillé had become distinguished, he referred to him in his capacity as the scholarly and discriminating author, the erudite and conscientious professor, and the active and untiring worker for the good of the profession, "it being not the least of his claims that he was prominent, none more so, among the founders of the body which has done so much to bring the medical profession of this country into unison,—the American Medical Association."

The generous gift of the bulk of his large library to the ancient university with which his name is indissolubly connected must not remain unmentioned among his public-spirited acts. "But," the speaker continued, "it is not Stillé the author, the teacher, the worker, whom we hold dear; better than all, there is Stillé the MAN, whose life of probity, high sense of honor, and uniform courtesy have endeared him to all." After a passing allusion to the wonderful development and growth of medical science, and the prolificness of medical schools and medical journals, he addressed himself more directly to Dr. Stillé, and said, in conclusion, "Honored guest,—Be it in connection with the medicine of our country, or, better, as a summary of your whole career, it seems not inappropriate to apply to you the words of Cicero: '*Omnia summa consecutus est, virtute duce, comite fortuna.*' If you have attained the highest rank, with

virtue leading the way and fortune attending, it will so remain to the end. During the many years of vigorous life which we fervently hope are still before you, wherever you elect to pass those years, whether in the seclusion of your home and in lettered ease, or in visiting the scenes of former travel and early studies,—in whatever clime, whatever skies may cover and sun shine on your path,—with you will be the affectionate regards of those who surround you to-night, and of the far larger body of which we are only the temporary representatives; and you may know and feel that hundreds are joining now and will always join us in the wish, 'Health and long life to Professor Alfred Stillé!'"

Dr. Stillé, with evident emotion, rose to thank the speaker and the company for the eloquent and cordial greeting he had received, and said that his happiness would have been without alloy were it not for the absence of one to whom allusion had already been made, who had passed away venerable with years and resplendent with honors nobly won; to whom he had been under obligations for a long series of acts which were among the most grateful commendations of his professional life. Continuing, he said, "You, Mr. Chairman, have mentioned many of the positions of trust and honor conferred upon me at various times, or that I have received; yet it was to the favor of my medical brethren that I owe it all. I am free to acknowledge that this was the making of my history. Whatever I might have attempted, I should have achieved but little without their encouragement and approbation. Now, having reached that period when I may seek a well-earned repose in the evening of an eventful professional life, this goodly company, these cheerful and hearty greetings, these glowing lights and festive ornaments which accompany my retirement at the appointed period of threescore years and ten, appear to me like the flowering of that plant which is fabled to bloom but once in a century. All else in my professional life seems tame by comparison. The column, such as it was, that I have endeavored to rear in the temple of Æsculapius, to-night is crowned with a capital which is rich in the adornment of the Corinthian style. I can only trust that the plainness of the subject will do no injustice to the richness of the decoration. In looking from this eminence over the road I have travelled since my entrance into my professional life, no doubt is left that in most lives a mere accident often determines their scope and issue. I am sure that it was so with mine. While still a medical student, two young men, fellow-townsmen with me, returned from Paris glowing with fire they had caught in the then centre of medical science. Gerhard and Pennock were the apostles of the school of observation, and under their preaching I be-

came a willing convert. As soon as possible, I hastened to the charmed scene of their intellectual labors, further stimulated thereto by the traditions of men like Jackson, Bowditch, and Holmes, and enjoying the salutary society and co-operation of one who still survives, and to-night is at my side to do honor to his old friend and to your invitation,—Dr. George C. Shattuck, of Boston.

"There is still another before me, venerable with all save the weakness of age,—ex-Medical Director of the United States Navy Dr. W. S. W. Ruschenberger, with whom I made that homeward voyage of six weeks' duration which cemented a friendship which has survived the test of *tempus edax rerum*. It is not often given to men to renew associations such as these at the expiration of nearly half a century; to feel that time, which destroys so much, often spares so much of that which is best in our experience of men.

"In one of my summer holidays abroad, it was my lot—less vulgar than now—to climb the Alps and note the expedients used by the mountaineers in ascending the icy peaks. I saw with what laborious industry they cut foot-holes in the slippery steep and thus slowly but steadily mounted to their destination. I was profoundly impressed by this method, and said to myself, 'This, surely, is the way to hew the road to fame and fortune, and whether the point to be reached be the topmost peak of all, or some humbler hill-top on the way, it is clear that, whatever else may win, *improbis labor omnia vincit*.' What seemed revealed to me then among the sublime silences of nature has been echoed by a thousand voices along the whole pathway of my life. There is in my family a motto which runs '*Innocenter, patienter, constanter*,' and I can say that the value of steady, straightforward work, without regard to external surroundings, cannot be overestimated. This has been the keynote of my whole professional life, and whatever success may have crowned my efforts is due to its truth, aided by the friendly encouragement of my colleagues. May the ideal 'crown of triple oak' with which our chairman has honored me to-night preserve its freshness throughout my life, and be prized by those who come after me, as more precious than any material badge of gold or jewels!"

After Dr. Stillé had concluded his remarks, Surgeon J. S. Billings, U.S.A., was called upon to reply to the toast "Our Invited Guests." Dr. G. C. Shattuck answered to the sentiment "Old Friends." Drs. Flint, J. S. Billings, and Pepper were called upon personally, and made brief responses. The loving-cup was then passed from hand to hand, and the dinner was over. A very pleasant feature of the occasion was a presentation to Dr. Stillé of an autograph album containing the letter inviting him to the dinner, his reply, and the names of those who were present. The din-

ner to the distinguished professor, which is now part of the medical history of Philadelphia, was most creditable both in conception and in execution, and did honor to those who gave it, as well as to Prof. Stillé, whom all delight to honor.

NOTES AND QUERIES.

THE DIASTATIC VALUE OF MALTINE.

The following results of analyses are furnished us for publication. They were made by competent chemists, and are given here in order to correct some misstatements made to members of the profession by interested parties at the recent meetings at Washington and elsewhere. They are published as a simple act of justice to the manufacturers of Maltine.

"Report of a Comparative Determination of the Diastatic Value of Trommer's Extract of Malt and of Maltine:

"The two samples of malt extract were delivered to me in original sealed bottles, with the druggist's label attached to each.

"One-half gramme (= $7\frac{1}{2}$ grains) of each extract was mixed with 200 c.c. (= 6 oz.) of three-per-cent. starch-paste, and the whole kept in a water-bath at 45° C. (= 113° F.) for 30 minutes. The whole amount of the sugar in each of the flasks was then determined, and from this was subtracted the respective amount in the half-gramme of extract used. The remainder, which represents the actual amount of sugar formed from starch by the diastase, was in the case of 'Trommer's Extract of Malt,' 0.470 gramme (= $7\frac{1}{2}$ grains), and of 'Maltine,' 2.728 grammes (= 42 grains). The determinations were made by Fehling's solution, and the sugar calculated as maltose: as dextrose, it would be one-third less.

"J. R. DUGGAN, A.M., M.D.,
Fellow in Chemistry.

"PHILADELPHIA, May 15, 1884."

"To the Members of the Pennsylvania State Medical Society.

"At the meeting of the American Medical Association held last week in Washington, four-ounce samples of two malt extracts were purchased by two prominent members of the Association and put into plain bottles, on which were the labels of a prominent druggist, from whom they were purchased. These samples were marked Nos. 1 and 2, and handed to Prof. R. Dorsey Coale for examination as to their diastatic or starch-digesting power.

"These tests were made with Fehling's solution, which is the only reliable method of testing malt extracts for diastase.

"At the close of the examination, Dr. William H. Coggeshall, of Richmond, Va., one of the physicians who made the purchases and watched every step of the process, announced that No. 1 was Maltine, and No. 2 Trommer's Extract of Malt.

"The tests were made before many members of the Association on Friday, at the Exhibit Rooms, Masonic Hall.

"PHILADELPHIA, May 14, 1884."

"WASHINGTON, D.C., May 9, 1884.

"Report of a Comparative Examination of the Diastatic Activity of Two Samples of Malt Extract:

"The two samples of malt extract were delivered to me in plain four-ounce bottles, labelled respectively 'No. 1' and 'No. 2.'

"Equal weights— $\frac{1}{2}$ gramme—of each of the samples were mixed with 200 c.c. of 3½-per-cent. starch-paste (containing 7 grammes of starch), and the mixture warmed at 130° to 140° F. in the same water-bath for twenty minutes.

"At the end of that time, the amount of sugar contained in each of the mixtures was determined by means of a Fehling's solution, the sugar being calculated as dextrose.

"No. 1 was found to have formed 1.678 grammes of sugar; 'No. 2' was found to have formed .739 gramme. The amount of sugar contained in both of the malt extracts was previously determined, and this amount subtracted from the total amount of sugar found after digestion with the starch. The figures given above, therefore, represent the actual amount of sugar formed from the starch by the diastase in the two cases, and thus represent the relative diastatic power of the two samples.

"R. DORSEY COALE, Ph.D.,

"Professor of Chemistry and Toxicology,
University of Maryland."

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 25, 1884, TO JUNE 7, 1884.

MOORE, JOHN, LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR.—Ordered to perform, in addition to his present duties, those of Medical Storekeeper, San Francisco, California.

JOHNSON, HENRY, CAPTAIN AND MEDICAL STOREKEEPER.—Relieved from duty at the medical purveying depot at San Francisco, California, and ordered to report for duty at the medical purveying depot, New York City, relieving Captain Andrew V. Cherbonnier, Medical Storekeeper.

CHERBONNIER, ANDREW V., CAPTAIN AND MEDICAL STOREKEEPER.—On being relieved by Captain Johnson, will proceed to St. Louis, Missouri, and report in person to Captain George T. Beall, Medical Storekeeper and Acting Assistant Medical Purveyor, for duty at the purveying depot at St. Louis, Missouri, relieving Captain Beall of his duties as Medical Storekeeper. Paragraph 9, S. O. 128, A. G. O., June 3, 1884.

FRYER, BLENCOWE E., MAJOR AND SURGEON.—Granted leave of absence for one year from July 1, 1884. Paragraph 7, S. O. 128, A. G. O., June 3, 1884.

HALL, JOHN D., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for three months, to take effect on his arrival at St. Paul, Minnesota. Paragraph 8, S. O. 128, A. G. O., June 3, 1884.

HEGER, ANTHONY, MAJOR AND SURGEON.—Assigned to duty at Fort McHenry, Maryland, as post surgeon. Paragraph 1, S. O. 108, Headquarters Department of the East, June 2, 1884.

BAILY, JOSEPH C., MAJOR AND SURGEON.—Now on leave of absence, is relieved from duty in Department of Texas, and ordered to report to commanding general Department of the East, for assignment to duty at Fort Monroe, Virginia, to relieve Lieutenant-Colonel Charles Page, Surgeon U.S. Army, on July 1, 1884, from duty at that station.

PAGE, CHARLES, LIEUTENANT-COLONEL.—On being relieved by Major Baily, will proceed to Fort Leavenworth, Kansas, and report to commanding general Department of the Missouri, for assignment to duty as medical director of that department.

Paragraph 12, S. O. 125, A. G. O., May 29, 1884.

WRIGHT, J. P., MAJOR AND SURGEON.—Directed to perform temporarily, in addition to his other duties, those of Medical Director, Department of the Missouri. Paragraph 2, S. O. 107, Headquarters Department of the Missouri, May 28, 1884.

HUNTINGTON, DAVID L., MAJOR AND SURGEON.—During the absence of the Surgeon-General, directed to take charge of the office of the Surgeon-General and perform his duties. Paragraph 6, S. O. 129, A. G. O., June 4, 1884.

BENTLEY, EDWIN, MAJOR AND SURGEON.—Assigned to duty at Fort Clark, Texas, as post surgeon. Paragraph 1, S. O. 68, Headquarters Department of Texas, May 31, 1884.

MIDDLETON, PASSMORE, CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 2, S. O. 107, Headquarters Department of Missouri, May 28, 1884.

KOERPER, EGON A., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Keogh, Montana Territory. Paragraph 1, S. O. 58, Headquarters Department of Dakota, May 27, 1884.

HALL, WILLIAM R., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Stockton, Texas. Paragraph 1, S. O. 63, Headquarters Department of Texas, May 19, 1884.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—Now on sick leave of absence, is relieved from duty at Columbus Barracks, Ohio, and ordered to report to commanding general Department of the East, for assignment to duty. Paragraph 2, S. O. 129, A. G. O., June 4, 1884.

CUNNINGHAM, T. A., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to relieve Assistant-Surgeon C. B. Byrne, U.S. Army, from duty at Fort Lewis, Colorado; Assistant-Surgeon Byrne, when so relieved, ordered to proceed to Fort Gibson, Indian Territory, and report to the post commander for duty. Paragraph 2, S. O. 112, Headquarters Department of Missouri, June 4, 1884.

BANISTER, J. M., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month and seven days, to commence June 13. S. O. 22, Headquarters Division of the Atlantic, June 5, 1884.

MC CREERY, GEORGE, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply to the Adjutant-General of the Army for two months' extension. Paragraph 3, S. O. 56, Headquarters Division of Missouri, June 5, 1884.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Canby, Washington Territory, and ordered to return to his proper station (Fort Walla Walla, Washington Territory). Paragraph 2, S. O. 70, Headquarters Department of Colorado, May 26, 1884.

OWEN, WILLIAM O., JR., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Having reported at these headquarters in compliance with Paragraph 5, Department Special Orders, No. 62, current series, will return to, and take station at, Fort Stevens, Oregon.

In addition to his duties at Fort Stevens, Assistant-Surgeon Owen will perform those of medical officer at Fort Canby, Washington Territory. Paragraph 1, S. O. 70, Headquarters Department of Colorado, May 26, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM MAY 25, 1884, TO JUNE 7, 1884.

P. A. Surgeon F. ANDERSON, ordered to Navy-Yard, New York.

P. A. Surgeon H. G. BEYER, detached from Coast-Survey Steamer "Blake," ordered to Smithsonian Institute for special duty.

P. A. Surgeon W. H. RUSH, detached from U.S. steam-ship "Despatch," and ordered to Coast-Survey Steamer "Blake."

P. A. Surgeon L. G. HENEBERGER, detached from Navy-Yard, New York, ordered to U.S. steam-ship "Despatch."

P. A. Surgeon S. H. GRIFFITHS, ordered to U.S. steam-ship "Lancaster" on expiration of leave of absence.

P. A. Surgeon M. D. JONES, detached from Naval Hospital, New York, and resignation accepted, June 15, 1885.

Surgeon I. C. WISE, detached from Academy, and ordered to U.S. steam-ship "Constellation."

P. A. Surgeon J. M. MURRAY, detached from U.S. steam-ship "Passaic," ordered to U.S. steam-ship "Constellation."

P. A. Surgeon W. MARTIN, detached from U.S. steam-ship "Constellation," ordered to U.S. steam-ship "Passaic."

P. A. Surgeon T. C. CRAIG, detached from U.S. steam-ship "Minnesota," ordered to U.S. steam-ship "Vandalia."

P. A. Surgeon C. W. DEANE, detached from U.S. steam-ship "Vandalia," ordered to U.S. steam-ship "Minnesota."

P. A. Surgeon J. H. HALL, detached from U.S. steam-ship "Minnesota," ordered to Naval Hospital, Brooklyn.

Medical Director P. S. WALES, to continue present duty until August 1, 1884.

Surgeon H. M. WELLS, to temporary duty at Naval Laboratory.

P. A. Surgeon E. H. MARSTELLER, detached from U.S. steam-ship "Vermont," ordered to U.S. steam-ship "Monongahela."

Assistant-Surgeon H. B. SCOTT, commission to date from July 11, 1883.

Assistant-Surgeon V. C. B. MEANS, commission to date from June 3, 1884.

Assistant-Surgeon F. A. HESLER, commission to date from June 3, 1884.

PHILADELPHIA, JUNE 28, 1884.

ORIGINAL LECTURES.

INFLAMMATION OF THE IRIS, AND ITS TREATMENT.

BY DUDLEY S. REYNOLDS, M.D.,

Professor of General Pathology and Diseases of the Eye
and Ear in the Hospital-College of Medicine, Medical
Department of Central University of Kentucky.

*A paper read before the Kentucky State Medical Society
at Bowling Green, June 4, 1884.*

IN order that the morbid conditions of any structure, organ, or tissue of the body may be well understood, it is necessary, first, to consider the elementary constituents of the part and its normal functions.

The iris is a complex and peculiar organ: its structure, though resembling in appearance and directly continuous from the ciliary body with the choroid, is different in several essential particulars. The iris is made up of a net-work of elastic tissue, capillary blood-vessels, and a large amount of pigment held loosely together by connective-tissue fibre. The pupillary opening of the iris is surrounded by a circular muscle, into the sheath of which are projected the filamentous extremities of those slips of homogeneous hyaline connective-tissue fibre from the division of the posterior elastic layer of the cornea through what is called the pectinate ligament of the iris. The iris then is attached at its periphery, by means of the pectinate ligament, to the cornea. The radiary fibres of the iris are in no sense muscular: they are of the structureless, hyaline, connective-tissue type, and are the direct continuations of the filaments of the pectinate ligament. The only muscular fibres of the iris are those contained within the sheath of the constrictor pupillæ muscle. The posterior surface of the iris is a delicate moss-like surface, made up of fine connective tissue, holding loosely an abundant supply of pigment, always found in this portion.

When the iris is inflamed, its blood-vessels offer mechanical resistance to dilatation of the pupil: this secures more firm contact between the posterior surface of the iris and the anterior surface of the capsule which contains the crystalline lens. Adhesions, therefore, usually occur

early in the course of an iritis. The absence of arteries and of veins always limits the extent and modifies the character of disorganization of the iris. An inflammation of the iris has its chief dangers either in the formation of abnormal adhesions with the lens-capsule, or, what very much more rarely happens, the extension of the process to the ciliary body, and, finally, to the choroid. The vascular connection between the choroid and the ciliary body is limited to a very small number of arterial twigs, whilst the vascular connection between the iris and the ciliary body is limited to those venules which carry blood from both of these structures, or, more properly speaking, from the whole of the iris and a part of the projecting portion of the ciliary body, into the venous sinus called the canal of Schlemm.

When embolism takes place in this canal, the eye rapidly undergoes shrinkage, and it is, from the moment of its occurrence, fatal to the existence of vision.

Iritis is very much more likely to follow inflammation of the ciliary body than inflammation of the ciliary body is likely to follow iritis. The position of the iris renders it more liable to mechanical injuries. The enormous extent of surface to be supplied by capillary vessels alone necessarily renders the circulation of blood in this structure somewhat sluggish, and it is, therefore, a favorite site for the development of syphilitic gummæ.

It is an unfortunate error in the medical profession to attribute all forms of iritis, not due to traumatism, to syphilis. Iritis when *not* characterized by the presence of nodular elevations upon the surface, circumscribed infiltrations of the stroma, or projecting bodies upon the pupillary margin, is not distinctively syphilitic: these forms alone are characteristic and typical; they denote constitutional syphilis as certainly as any other local manifestation of that disease.

In the so-called malarial diseases, micrococci have been found clogging the capillaries of the iris, causing suppurative inflammation, which, extending to the ciliary body and to the choroid, develop a panophthalmitis, making it necessary to enucleate the eye to protect its fellow from the ravages of the so-called sympathetic ophthalmia.

Rheumatic disease is sometimes said to

be the cause of iritis. In my own experience, however, the iritis of rheumatism is a secondary phenomenon, depending upon a pre-existing inflammation of the ciliary muscle.

Tuberculosis of the ciliary body and the choroid is a common affection: it is always, of course, of that type called the miliary tubercle, and in rare instances it is seen in the iris. A limited number of cases of miliary tubercle of the iris recover.

I have seen two cases of the so-called sebaceous cysts of the iris. There is no glandular organ in communication with the iris which might furnish a veritable sebaceous secretion, but the degeneration which takes place in the lymph-cells of tubercular disease yields a product of a very closely analogous character. Graefe is responsible for the term sebaceous cyst of the iris: his case, published in his *Archives*, a case reported by Dr. George Strawbridge, of Philadelphia, to the Ophthalmological Section of the International Congress of 1876, and a case occurring in my own practice, which I published in the *Philadelphia Medical and Surgical Reporter* of April 4, 1874, are the only recorded cases I can now remember.

Cystic tumors are especially liable to follow penetrating wounds, as was pointed out by Mr. Bowman. According to Mr. Hulke, cystic tumors of the iris are generally filled with fluid contents.

Removal of the tumor in the case above referred to was done by me on January 23, 1874. The patient recovered so far as to be able to return home on the 27th. On February 14 he wrote, "My eye is getting along very well: it has not much inflammation, and I can see to count fingers across the room." At that time I entertained but little doubt of the ultimate recovery of the eye. In the month of April, however, the young man exposed himself to a heavy rain at a time when he had been ploughing and exerting himself. He was seized with bronchitis, and, two days later, with acute iritis. The margins of the pupil became quickly adherent to the lens-capsule; the pain was intense, yet it was two or three days after the iritis set in before the foolish man sought medical advice. The iris was then extensively attached posteriorly to the lens-capsule, and a considerable exudation of lymph had poured out, which effect-

ally sealed up the opening between the two chambers. A rapid secretion of aqueous humor in the posterior chamber, pressing hard against the infiltrated iris, forced it finally into contact with the cornea, and, following this, rupture of the capsular ligament of the lens, and detachment of the retina. Of course the eye had to be enucleated.

This is a sad history, and I relate it as a warning to medical practitioners to lose no time, in all forms of inflammation of the iris, in applying promptly some efficient mydriatic.

I have not mentioned any of the pathological peculiarities of traumatic iritis, because it differs in no material respect from traumatic inflammation in other parts of the body. The one great principle, however, to be observed in the treatment of all forms of iritis is to secure early and full dilatation of the pupil, and to maintain this state throughout the whole course of the inflammation, and upon the degree of intensity of the inflammatory action will the frequency of application of the mydriatic, as well as the strength of the solution, depend.

The sulphate of atropine has long been regarded as the most available and at the same time the best agent for the production of a prompt dilatation of the pupil, and, at the same time, the suspension of accommodation, which is necessary to put the eye in a state of entire rest. Experience, however, has shown that it frequently happens that when atropine solution has been instilled into the eye, a violent inflammation of the conjunctiva, and sometimes of the cornea, attended by oedema of the lids, has been brought on. More frequently still, the use of atropine greatly augments the tension of the eyeball, and in this way endangers its safety. For these reasons, I am convinced that the sulphate of atropine will finally disappear from the list of ophthalmic medicines.

That prodigy in science, Merck of Darmstadt, to whom the world is indebted for many grand discoveries, has at last succeeded in producing by synthesis an agent which, though it resembles atropia in its therapeutical and physiological action upon the iris, is not attended by any of the dangers which have been enumerated as objections to the sulphate of atropine. Although the momentary local effect is sometimes slightly irritating, it is

more promptly and powerfully efficient in dilating the pupil and suspending the accommodation of the eye, and it is more prompt in relieving the pain of ciliary neuralgia. The only objection that can be urged against its universal use is the increased cost of this drug as compared to others which have similar effects. It has now come into universal use with ophthalmic surgeons for suspending the accommodation in order to test the refraction of the eye. I have gradually come to rely upon the anodyne properties of this drug, because, in my experience, its soothing effect is more persistent than that of atropine, whilst the therapeutical indications are the same.

The hydrobromate of homatropine is now retailed at about seventy-five cents a grain, which is to be dissolved in one drachm of water. A single drop of this solution is sufficient for one application. It may be applied in severe cases of pain from acute iritis every five minutes until the pain ceases or is abated, and that for an indefinite time without producing any constitutional disturbance whatever. Patients complain of the presence of an unusually disagreeable and bitter taste, with a sense of warmth in the pharynx, after the second or third application. These are all the disagreeable effects I have ever noticed from its use.

In the healthy eye, the effects upon the pupil disappear in from twenty-four to thirty hours; whilst the effects of the sulphate of atropine persist from eight to fourteen days. Donders found that one grain of sulphate of atropine dissolved in a pint of water would, on the instillation of a single drop of the solution, disturb the accommodation of the eye for fourteen days.

Now, it must not be forgotten that no other local treatment is ever necessary in any case of iritis, so far as the function of the iris is concerned, than the frequent use of a solution of either the hydrobromate of homatropine, which is the best of all mydriatics, or the sulphate of atropine, the sulphate of duboisine, or the sulphate of daturine.

Now, as to the constitutional treatment. Viewing the inflammation in the iris in the same light as a similar character of localized inflammation in any other part of the body, the general practitioner of medicine will have little difficulty in de-

termining upon the proper course to pursue. In all the malarial cases periodicity will be observed in the occurrence of the pain coincidently with exacerbations of fever. Constitutional treatment in such cases as this should be that which is suggested by the pathological type and character of the malady. Syphilitic iritis always yields to the iodide of potassium or the iodide of sodium administered in progressively increasing doses, to be given in solution and diluted by a full glass of water. The rheumatic forms may yield to the iodides, alone or alternated with salicylate of soda.

In the tubercular form, where the disease is located in the iris, iridectomy including the affected part should be promptly done, and the treatment generally regulated according to the constitutional condition of the patient. In the traumatic forms, such treatment as the wounds of other structures may demand will readily suggest itself to the intelligent practitioner.

Burns, whether from chemical agents or hot substances, should not be treated with the eye closed, because of the danger of the formation of adhesions between the apposed raw surfaces of the eyeball and the lid.

Following these general rules faithfully and persistently, the practitioner will almost uniformly have the satisfaction of being able to save the eye, which would surely be lost either by a few hours of neglect, or, as is too often the case, acting under a misapprehension of the pathology or of the therapeutical indications, by the application of some stimulating astringent collyrium.

Another form of iritis which may seldom be seen by the general practitioner occurs from prolonged strain of the accommodation in the eyes of hypermetropes. This form requires no constitutional treatment, but local mydriasis must be maintained until all irritation ceases before any attempt at correcting the refraction.

THE *American Journal of Ophthalmology*, edited by Dr. Adolph Alt, of St. Louis, with associate editors in the principal medical centres, is a new monthly journal on this subject, of decided value. Judging from the first two numbers, it will contribute materially to this branch of medical science in this country.

ORIGINAL COMMUNICATIONS.

REPORT ON MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

CHEMISTRY OF THE URINE.

GLUCOSE.—Emil Nylander recommends the following formula for a bismuth solution for the detection of glucose: Two grammes of bismuth subnitrate and four grammes of sodio-potassium tartrate are dissolved in one hundred grammes of a sodium hydrate solution containing eight per cent. of sodium oxide (sodium hydrate, thirteen grammes; water, ninety-seven grammes). By the addition of one part of this liquid to ten parts of urine, the presence of 0.05 per cent. of glucose may be detected, while urine free from glucose gives no result. The presence of albumen causes a red-brown precipitate which can scarcely be a source of error, but a large quantity of albumen interferes with the test. The proportions of urine and test-solution must be rigidly adhered to, as too much of the alkaline liquid precipitates the phosphates with a brown color.

On the estimation of glucose by Fehling's solution, F. Meyer has made an observation which may be serviceable in the analysis of urine. Towards the end of the reaction the cuprous oxide will deposit much more rapidly if a drop of zinc chloride solution be added to the boiling liquid, for the zinc hydrate formed settles quickly, and carries with it the cuprous oxide mechanically.

THE PROPORTION OF CHLORIDES in urine may, according to Wladimir Michailow, be determined directly by Mohr's volumetric method, after filtering the urine through animal charcoal. The uric acid and pigment will be retained, while the sodium chloride passes through without loss.

The same authority recommends Mohr's method for the separation of *animal pigments* by saturating their solutions with ammonium sulphate, as specially adapted for the precipitation of the coloring-matter of blood-serum and the urobilin of urine. He states, however, that the urobilin is not entirely precipitated from urine by the reagent, as an additional quantity can be obtained from the liquid by agitation with acetic ether. Solutions of urobilin in ammoniacal alcohol or acetic ether become oxidized on exposure to the air,

with formation of biliverdin, although the same oxidation cannot always be produced by treatment with potassium chromate or manganese dioxide and hydrochloric acid.

β -CROTONIC ACID has been detected in the urine in diabetes mellitus by E. Stadelmann, who has investigated the elimination of ammonia and the cause of diabetic coma. The presence of ammonia in large quantities—amounting to from three to eight, and in one case twelve, grammes per day—in seven cases of diabetes, and the excess of ammonia over the quantity of known acids, as shown by analysis, although the urine had an acid reaction, led to the research for a new acid. The evaporated urine was extracted with alcohol, the alcoholic solution evaporated, mixed with dilute sulphuric acid, and agitated with ether. After evaporation of the ethereal extract, the residue was distilled with water, of which the steam carried over an acid that formed well-crystallized barium and zinc salts. The free acid is uncrystallizable, and soluble in all proportions of water. Analysis of the zinc salt gave the figures required by crotonic acid, and all the properties of the acid and its salts indicate it to be β -crotonic acid.

Stadelmann considers the presence of large quantities of this acid in the system—from six to eight grammes per day were found in severe cases—as the cause of diabetic coma, and recommends as a remedy the subcutaneous injection of a two or three per cent. solution of sodium carbonate (the acid carbonate is probably intended).

FOR THE ESTIMATION OF IODINE IN URINE, Harnack recommends that the urine should be evaporated and incinerated with an excess of sodium hydrate, the carbonaceous ash exhausted with hot water, and the residue, together with the filter, again treated with sodium hydrate and burned; the mixed solution is then acidulated with hydrochloric acid, and treated with an excess of palladium chloride and allowed to stand twenty-four hours. The precipitate is collected on a tared filter, washed with hot water, dried at 100° , and weighed. This analysis gives the entire quantity of iodine present. For the estimation of potassium iodide, he treats the urine, slightly acidulated with hydrochloric acid, with palladium chloride, and fuses with soda the precipitate formed after standing a day or two. The aqueous solution of

the ash is again acidulated with hydrochloric acid, precipitated by palladium chloride, and the precipitate collected, washed, dried, and weighed.

DIGESTIVE FUNCTIONS OF BILE-ACIDS.

The probable digestive functions of the biliary acids, and their antiseptic properties, have been newly investigated by Richard Maly and Fr. Emich. When a solution of *taurocholic acid* is added to the solution of a peptone, the liquid becomes milky and an abundant white precipitate is formed; this cannot be separated by filtration, and deposits very slowly: under the microscope it appears to consist of small globules. It dissolves with such facility in alkaline liquids that the serum of blood at once causes it to disappear; but it is reprecipitated by hydrochloric or acetic acid. The original precipitate is entirely soluble in alcohol, and with cupric sulphate and potassium hydrate gives only a faint rose color. The authors consider that it is *taurocholic acid* and a little peptone, for the greater part of the latter remains in the supernatant liquid. Common salt as well as protopeptone solutions also precipitate *taurocholic acid*. On the contrary, albumen and albumen-syntonin give an entirely different reaction with this bile-acid: a flocculent precipitate is formed, soluble in alkaline liquids, but insoluble in alcohol; this precipitate contains *taurocholic acid* and *all* of the albumen present. This reaction makes *taurocholic acid* a valuable reagent for the quantitative separation of albuminoid substances from peptones and proto-peptones.

A saturated aqueous solution of *glycocholic acid*, which contains only .03 per cent. of the acid, is not clouded either by peptone or by protopeptone. If to a more concentrated solution of sodium glycocholate a peptone and then an acid be added, a crystalline or amorphous precipitate of *glycocholic acid* is formed, while all the peptone remains in solution. Albumen is very imperfectly precipitated by the addition of sodium glycocholate and acid.

A mixture of the two biliary acids of man behaves with peptone, protopeptone, and albumen just as does *taurocholic acid*.

These results indicate that in the duodenum, where the bile mixes with the chyme, and where the reaction is at first acid, neither syntonin nor albumen can exist in solution, but the peptones remain

dissolved. This temporary precipitation of the albuminoid matters which are subsequently subjected to the action of the pancreatic juice probably facilitates the absorption of the peptones.

All observers are in accord that the biliary acids are capable of arresting fermentation; and Emich's investigations have only aimed at determining the special functions of the separate acids in this respect. 0.2 to 0.5 per cent. of *taurocholic acid* is sufficient to prevent the putrefaction of an infusion of flesh or of pancreas, as well as the alcoholic and lactic fermentations. The latter change is the most readily influenced, being at once arrested by 0.25 per cent., and retarded by 0.1 per cent. *Glycocholic acid* is less active, even in much larger quantities, failing to arrest completely the fermentation changes: 2 per cent. does not completely prevent the putrefaction of a pancreatic liquid nor the lactic fermentation, and has no sensible effect on the alcoholic fermentation.

The hydration of albuminoid matters is affected in the same manner by these acids: 0.2 per cent. of *taurocholic acid* is sufficient to interfere with the action of pepsin or ptyalin; for the same purpose 0.5 to 1 per cent. of *glycocholic acid* is required, and even this quantity has little influence on the action of pepsin. The saccharifying influence of the pancreatic juice is destroyed by 0.1 per cent. of either acid.

SOME DERIVATIVES OF ALBUMEN.

The immediate products of the decomposition of albumen have been the subjects of an extended study by W. Kühne and R. H. Chittenden. In accordance with the results of recent observers, the transformation of albuminoid matters into peptones by the action of gastric or pancreatic juice has been considered as a series of hydrations, which start with the albuminoid matter and progress to syntonin, protopeptone, and peptone. Meissner believed that the albuminoid molecule was decomposed by peptonization; and under the name *para-peptone* he described one of the products of this decomposition which resisted the action of gastric juice. However, Meissner's results have been contradicted, and his *para-peptone* has been stated to be a mixture. On the other hand, Schutzenberger has shown that when albumen is boiled with dilute sulphuric acid it separates into about equal propor-

tions of a soluble substance resembling the peptones and named by him *hemialbumine*, and an insoluble matter which he called *hemiproteine* and found to resist completely the further action of dilute acid.

After studying these facts, and from personal experiments, Kühne and Chittenden conclude that during its conversion into peptones an albuminoid molecule first undergoes a separation into two substances, which subsequently become hydrated, but with very unequal rapidity. By the action of pepsin, one of these substances, *hemialbumose*, readily furnishes a *hemipeptone*, which is quickly destroyed by trypsin with formation of leucine, tyrosine, etc. The other substance, *antialbumose*, is only slowly attacked by pepsin, more rapidly by trypsin, and yields an *antipeptone* which entirely resists the further action of trypsin, and furnishes no leucine or tyrosine if the production of putrefactive bacteria in the mixture be prevented. There is also another matter, *antialbumide*, probably derived from antialbumose. All these different products of hydration may be obtained from blood-albumen, egg-albumen, syntonin from muscles, and from fibrin.

It would follow that the body heretofore described under the name peptone is a mixture of antipeptone and hemipeptone. Hemialbumose is identical with protopeptone and a substance discovered by Bence Jones in the urine of a patient suffering from osteo-myelitis: it is probably a mixture of two substances, one of which is much more soluble in water than the other. The hemiproteine of Schutzenberger is the antialbumide of Kühne and Chittenden, and hemialbumine is a mixture of hemialbumose and hemipeptone.

THE CAUSE OF COAGULATION OF PLASMA.

According to L. Wooldridge, blood-plasma which by continual centrifugal agitation has lost its coagulability from the action of carbon dioxide, again coagulates when treated with the evaporated alcohol-etheral extract of white corpuscles. This extract contains lecithine and a small quantity of fatty acids, from which it appears that lecithine is a factor in coagulation. The presence of a ferment cannot be admitted, for the extract retains its activity after boiling with water. Lecithine derived from the red corpuscles produces effects entirely analogous to that extracted

from white corpuscles, but that obtained from eggs is in most cases entirely inactive. The inactivity is ascribed to the presence of neurine, which always remained in the inactive preparations. Since the plasma, free from corpuscles, can be coagulated by the fibrin ferment only after treatment with carbon dioxide, it appears probable that the plasma does not contain fibrinogen already formed, but a substance capable of conversion into fibrinogen.

PTOMAÏNES AND NEURINE.

Z. Marino Zucco calls attention to the fact that his analyses of the cadaveric alkaloïds have shown that these substances are neurine, and he considers that to this compound must be attributed all the ptomaïne reactions obtained by Selmi and others from cadaveric extracts. He has found that the physiological action of neurine is quite comparable with the effects of the ptomaïnes studied by Selmi.

In an article partly in reply to the above, L. Brieger admits that the substance which he had extracted from decomposed horse-flesh and horse-liver has proved to be neurine, and considers that it is derived from a putrefactive transformation of choline, with elimination of a molecule of water. Although Schmiedeberg has stated that choline has no toxic effect on animals, Brieger finds that it possesses marked poisonous properties, but only when administered in comparatively large doses. One decigramme of choline hydrochloride was required to produce effects similar to those of five milligrammes of neurine hydrochloride. He also remarks that a study of the results obtained by Selmi, Nencki, and Gautier and Etard is sufficient to demonstrate that Selmi's ptomaïnes do not consist wholly of neurine.

INTRAVENOUS INJECTION OF SALINE SOLUTIONS.

The injection of dilute common salt solution and albuminous liquids into the veins in replacement of blood has been newly studied by Ott, and his results are somewhat in discordance with the previous publications on the subject. In 1869, Cohnheim stated that the venous injection of a 0.6 per cent. solution of salt would save the lives of animals after the loss of as much as two-thirds of the entire quantity of blood. Ott finds that the organic constituents of the blood cannot be reduced below one-half the normal quantity, and

that then after the injection of salt solutions from twenty-six to fifty-one days are required before the blood again becomes normal; the number of red corpuscles attains the normal in from sixteen to forty-seven days. The same replacement occurs after removal of blood followed or unfollowed by the injection of blood-serum, but the latter, as well as defibrinated or whole blood, produces better effects than the salt solution. The addition of egg-albumen to the blood entirely fails of effect, as is shown by an increased excretion of urea. Foreign blood-corpuscles cannot live in the organism, notwithstanding the contrary statements of Panum. After the injection of blood, hydræmia and oliocythæmia are as apt to occur as after the injection of salt solution, but these effects are developed more gradually and disappear more slowly in the former case than in the latter.

HYPODERMIC INJECTIONS OF IRON.

Glaevecke has experimented upon dogs and men with *hypodermic injections of iron salts*. The experiments on dogs demonstrated that the citrate is most quickly and most thoroughly absorbed, and that ferrous sulphate is entirely absorbed if mixed with two or three times its weight of sodium citrate. The albuminate of iron is badly borne, while ammonio-ferrous sulphate is not absorbed at all. The pyrophosphate with sodium citrate, recommended by Neuss, possesses no advantage over the citrate, while it has the disadvantage of being more readily decomposed. After injections of the citrate, the presence of iron may be detected in the urine in half an hour, and in from two to four hours the elimination attains a maximum, as is evidenced by the dark color of the urine; after twenty-four hours there is no further elimination. In from four to six hours the quantity of iron in the bile is increased above the normal proportion, and, because the iron can here be detected as oxide, Glaevecke thinks that only this form exists in the system. Adults manifest no symptoms of poisoning after daily injections of one decigramme of the citrate, but the administration of two decigrammes is followed by vomiting and purging. The therapeutic effects of hypodermic injections of the citrate are said to have been satisfactory.

RELATIVE WASTE IN INANITION.

M. Rubner has studied the influence of the size of animals on bodily waste, the

experiments being made on fasting dogs, and finds that this waste is as the ratio of body-surface to weight. Large and small dogs expended 1143 calories in twenty-four hours per square metre of surface. Both albumen and fat participate equally in the waste. The following table is interesting as showing the relations between weight, surface, and waste:

Weight in kilos.	Surface in square centimetres per kilogramme.	Calories per kilo. in twenty-four hours.
31.2	344	35.68
24.	366	40.91
19.8	379	45.87
18.2	421	46.20
9.6	550	65.16
6.5	573	66.07
3.2	726	88.07

AN EXPERIMENTAL RESEARCH ON THE UTERO-PLACENTAL CIRCULATION.

BY J. P. PYLE, M.D.

THE exact method of the utero-placental circulation is a question that has for a long time occupied the thought and pens of medical writers. During the term of my medical studies in the University of Pennsylvania, my attention was directed to this subject as being one well worthy of research. Opportunity having offered, I undertook a series of experiments in the Pathological Laboratory of the above-named institution, under the guidance of Dr. H. F. Formad. The question was formulated and presented thus: Is there a communication between the maternal and placental blood-vessels which permits of the transmission of solid particles from the mother to the fœtus? This is a matter which is by no means settled, either positively or negatively; and mere opinions on the subject are valueless. The problem is one that can be settled only by direct experimentation. Its importance can be readily seen, for upon its solution depends, in a great measure, the decision of many moot points in physiology and pathology. Upon it depend, to a certain extent, the following questions: (1) that of hereditation; (2) the transmission of various so-called infectious diseases; and (3) possibly the transmission of tumors, syphilis, septicæmia, etc. As a means of attempting a solution of this problem, I began experimenting with pregnant animals.

At the outset, two methods of experimentation presented themselves to my mind: the first consisted in an endeavor to transmit solid colored granules from the mother to the foetus; the second, to transmit minute fungi to the foetus by means of septicæmia in the mother, it being a well-known fact that the blood in this affection is crowded with bacteria, both during life and after death: in other words, I wished to ascertain whether or not septicæmia in the mother would be conveyed to the foetus in utero.

The experiments, with the above-named objects, were undertaken in a manner hereafter to be described, and I obtained results which, though at times marked by partial failure, were yet so uniformly positive that it would seem to indicate that there is some means of direct communication between the maternal and foetal structures. Finally, for the purpose of attempting to demonstrate this mode of communication, I propose to give a systematic synopsis of my experiments and methods of manipulation. I will first detail the methods of work, giving also a record of the experiments, and then an account of some observations which I had a rare opportunity of making upon the human subject.

METHODS OF EXPERIMENTATION.

The experiments were made, for the most part, upon pregnant rabbits. On one occasion I had an opportunity of making a study on the human being: this was in the case of a woman who died of septicæmia in the eighth month of gestation. In order that the details of the experiments may be clear, I will describe the exact methods of the work and the modes of procedure. In the first series of experiments, an insoluble pulverized substance was injected into the circulation of pregnant animals,—ultramarine blue, in the form of a fine powder, being the substance selected. It was rubbed in a mortar with glycerin, and sufficient water added to permit its being used in a hypodermic syringe. A drop of the ultramarine liquid thus prepared showed under the microscope granules varying in size and measuring from 1-20,000 to 1-5000 of an inch in diameter. The ultramarine liquid was in all instances introduced into the circulation by means of a hypodermic syringe. As a rule, the jugular veins, being more

easy of access, were selected as a point of entrance; but in a few cases the liquid was placed in the abdominal aorta, and in a few instances thrown into the left ventricle of the heart. In every experiment the animal was completely anæsthetized. A second series of experiments was made by inoculations with septic materials crowded with bacteria. The substances used were sloughs taken from cases of phlegmonous erysipelas, false membranes from diphtheritic throats, etc., these being placed immediately beneath the skin. The result was always a suppurative inflammation, which led promptly to the death of the animal from septic poisoning in from two to five days. In all these cases of septicæmia the blood was filled with a multitudinous number of micrococci. Now, my object was obviously this: to determine whether or not these micrococci, being solid particles, would be transmitted to the foetus.

RECOGNITION OF THE MICROCOCCI.

As there is often great difficulty in distinguishing bacteria from other minute organic and inorganic particles, I will briefly give the methods I employed, which were principally those pointed out by Drs. Wood and Formad in their researches on diphtheria. When the micrococci appear in zoöglea forms, they are readily distinguished by an experienced eye. The micrococci of a zoöglea mass are always of a uniform size, and are always at the same distance from one another. On the contrary, fat-molecules and albuminous particles vary in size, and are at varying distances from one another. Micrococci may arrange themselves in pairs or in chains,—in contradistinction to non-living molecules or granules, which do not. In the strong acids and alkalies, alcohol, and ether, the micrococci are insoluble, while fat and most other molecules are readily soluble. Another method which I found quite serviceable consisted in simply treating the cut sections with a mixture of equal parts of glycerin and acetic acid. The micrococci in such preparations become yellowish brown and prominent amid the perfectly translucent structures. In examining the foetal tissues for either the coloring-matter or bacteria, absolute cleanliness was observed: the instruments and dishes were all previously washed in alcohol, as were the glass slides and covers.

They were also heated in a spirit-flame, so as to avoid all possibility of extraneous particles coming in contact with the preparation. The mounting-material was also subjected to a careful search for foreign matters, so as to avoid useless results and misinterpretations. The foetuses and placentæ themselves were also carefully washed in alcohol if any suspicion arose that they were contaminated with foreign particles. Furthermore, the remarkable regularity of the results would seem to exclude all possibility of accidental admixtures. I premise these remarks to show that all sources of error were considered and carefully guarded against.

ANATOMY OF THE UTERO-PLACENTAL CIRCULATION.

This subject, on which authors have differed in all ages, is still a matter of dispute among modern physiologists; and, although the immediate continuation of the uterine and placental vessels is almost universally denied, yet the mode of circulation from the mother to the foetus is still, notwithstanding thorough investigation, involved in much uncertainty,—especially as certain pathological conditions indicate that the intercommunication above referred to is, at least, probable. At this point, I desire to quote the views of Prof. Haeckel on this subject, they being accurate, concise, and recent. In his "Evolution of Man," vol. ii. p. 155, he says, "The nature of the placenta is this: the branches of the blood-vessels which traverse the wall of the allantois penetrate into the hollow tufts of the chorion, which are inserted into corresponding depressions in the mucous membrane of the maternal uterus. As this mucous membrane is also abundantly supplied with blood-vessels, which conduct the maternal blood to the uterus, and as the partition between these maternal blood-vessels and the embryonic vessels in the chorion-tufts soon becomes extremely thin, a direct exchange of substance is soon developed between the two sets of blood-vessels, which is of the utmost importance to the young mammal. The maternal blood-vessels do not, however, pass directly [anastomosis] into the blood-vessels of the embryonic chorion-tufts, so that two kinds of blood simply mix; but the partition between the two sets of vessels becomes so thin that it permits the passage of the most important food-materials, freed from unnecessary

matter [transudation or diosmosis]." The above observations of Prof. Haeckel are highly suggestive, as he clearly points out that, although no direct vascular communication is proved, yet the maternal and foetal vessels are in such close proximity as to allow not only the osmosis of fluids, but to make also the transmission of solid particles not impossible, according to his view. The walls of ordinary blood-vessels, through which white blood-corpuscles migrate in any part of the body, are by no means thicker than the materno-foetal membranes above referred to; and hence it appears to me very plausible that blood-corpuscles might easily penetrate the latter. To test this proposition, I resorted to direct experimentation, in a manner already detailed. These experiments consisted in the introduction of solid particles—*e.g.*, ultramarine blue and bacteria—into the circulation of a pregnant animal; and, on subsequent examination, they were found distributed not only throughout the maternal body, but also in that of the foetus: this was especially so in the series of experiments which consisted of septic poisoning induced artificially in the mother, in which not only the blood of the foetus but the various tissues of the body were gorged with the bacteria,—which is contrary to the few observations made by others. No one previous to this time had tried to induce septicæmia in animals intentionally with the idea of watching its effects on the foetus; whereas I think this is one of the best methods of observing a possible transition from the maternal to the foetal blood of solid particles, such as bacteria unquestionably are. Bacteria cannot penetrate tissues unless by pre-existing channels; and should they be transmitted from mother to foetus, then it is evident that some kind of intercommunicating channels do exist. It was for the purpose of demonstrating this fact that the experiments with septic material containing bacteria were undertaken.

EXPERIMENTS.

Experiment I.—Into the right jugular vein and subcutaneous tissue of a pregnant rabbit was injected some of the ultramarine liquid, in the manner above described. The animal was carefully guarded, and at the end of seven days I injected some more of the blue into the right jugular vein. In about half an hour from the last injection the animal was killed.

Post-Mortem Examination.—But two small foetuses were found in the uterus.

Microscopic Examination.—Particles of the coloring-matter were found in the maternal blood and tissues.

Examination of the Foetuses.—The heart, liver, and kidney of the first foetus were examined, but yielded negative results only. After a prolonged search, with teased preparations, in a portion of the neck were found several particles of blue. In the second foetus, likewise, most of the thoracic and abdominal viscera yielded negative results,—the liver alone rewarding my search. Placenta contained the blue. Cord not examined.

Experiment II.—The left jugular vein of a pregnant rabbit was exposed, and a quantity of the ultramarine liquid injected into it. In about three-quarters of an hour the animal was killed. Results entirely negative.

Experiment III.—The right jugular vein of a pregnant rabbit was injected with a quantity of the ultramarine liquid. Three hours subsequently the animal was killed. Post-mortem examination showed the lungs of the mother quite full of the blue. In this instance it could readily be seen with the naked eye.

Examination of the Foetuses.—They were all so small that the various organs could not be distinguished. Portions of each were teased, mounted, and examined in glycerin, with the following results: first, blue was present; second, blue granules found; third, blue found also in this one; fourth, in this one also the blue was found, and, as in the previous instances, in small amount. Placenta contained the blue. Blood expressed from the cord was found also to contain the coloring-matter.

Experiment IV.—Both jugulars of a pregnant rabbit were injected with the ultramarine liquid. The animal was carefully guarded till five days later, when it was again etherized, the abdominal walls carefully divided, and a quantity of the blue solution introduced into the abdominal aorta. Some was also injected into the left ventricle of the heart.

Microscopical Examination.—Blue found in all the maternal tissues, the walls of the gall-bladder especially containing it. Portions of each foetus were teased, mounted in glycerin, and examined, with the following results: first, negative results; second, positive results; third, positive results; fourth, positive results; fifth, positive results also. In all of these examinations different portions of the animals were selected. Placenta contained the blue. The cord also contained blue granules.

Experiment V.—Both jugular veins of a pregnant rabbit were injected with the ultramarine liquid. There were also made a number of hypodermic injections into the cellular tissue of the animal. Three days after the injection the animal was killed. Microscopical examination showed the blue in all the

maternal tissues. Portions of each foetus were teased, mounted in glycerin, and examined, with the following results: first, blue found in small amounts; second, negative results; third, negative results. Umbilical cord, blue granules were found adherent to the vessel-walls. Placenta also contained some blue granules.

Experiment VI.—Injected into the jugular veins of a pregnant rabbit some of the ultramarine liquid. Animal died in one hour. Results entirely negative.

Experiment VII.—The right jugular vein of a rabbit well advanced in pregnancy was injected with the ultramarine liquid. Three days subsequently the abdomen was opened and an injection made directly into the abdominal aorta. The left ventricle of the heart was also injected.

Microscopical Examination.—Blue granules found in all maternal tissues. First foetus, blue granules found, several having lodged in the liver; second foetus, blue granules found in small quantities; third foetus, blue granules found well distributed. Placenta yielded blue granules. In the cord also the blue matter was found.

Experiment VIII.—Both jugular veins of a pregnant rabbit were injected with the ultramarine liquid. Three hours after the injection the animal was killed. Microscopic examination showed the blue well distributed in the maternal tissues. A prolonged examination of foetuses and placenta yielded negative evidence only.

Experiment IX.—A rabbit well advanced in pregnancy was used. Both jugular veins were injected with the ultramarine liquid. Six hours subsequently the animal was killed. Examination of the foetuses gave the following results: first foetus, the blue granules were present; second, gave positive results; third, positive results,—several blue granules having lodged in the liver; fourth, negative results; fifth, several blue granules were found. Placenta also contained the blue granules. Cord, too, gave positive results.

Experiment X.—Both jugulars of a pregnant rabbit were injected with the ultramarine liquid. Two days later some of the same mixture was thrown into the abdominal aorta. Microscopical examination gave the following results: first foetus, positive results; second, positive results; third, negative results; fourth, positive results. The placenta and cord both contained the blue granules.

Experiment XI.—Both the jugular veins of a pregnant rabbit were injected with the ultramarine liquid. Two days later the right jugular vein was again injected. The animal was killed about one hour subsequent to the last injection. Microscopic examination gave the following results: first foetus, negative results; second, positive results; third, negative results. Placenta also contained a few of the colored granules. Cord not examined.

Experiment XII.—Both jugular veins of a pregnant rabbit were injected with the ultramarine liquid. A quantity of the same mixture was thrown into the loose connective tissue. Three days later the abdominal aorta was injected, also the left ventricle of the heart. Teased preparations of the fœtuses were mounted in glycerin and examined, with the following results: first fœtus contained blue granules; second gave positive results; third, positive results also; fourth, several blue granules were found. Placenta and cord not examined.

Experiment XIII.—Left jugular vein of a pregnant rabbit injected. Four hours after the injection the animal was killed. Results entirely negative.

Experiment XIV.—Both jugular veins of a pregnant rabbit injected with the ultramarine liquid. The following day the abdominal aorta was also injected. One hour later the fœtuses—three in number—were removed from the uterus and examined,—all giving positive results.

Experiment XV.—Some of the ultramarine liquid was introduced into both jugulars of a pregnant rabbit. The following day the animal was killed. Microscopical examination gave the following results: first fœtus contained the blue; second fœtus gave negative results only; third fœtus contained the blue granules; fourth fœtus contained the blue granules; placenta contained the blue. Cord not examined.

Experiment XVI.—The left jugular vein of a pregnant rabbit was injected with the ultramarine liquid. The following day the right jugular was injected. The animal was killed in about fifteen minutes after the last injection. *Microscopical Examination:* first fœtus contained the blue; second fœtus contained blue granules; third fœtus contained blue granules; placenta, blue granules found in this organ; in the cord, also, the blue was present.

Experiment XVII.—A rabbit well advanced in pregnancy was used for experiment. Injected both jugular veins with the ultramarine liquid. Two days subsequently the jugular veins were again injected. At this time the abdominal aorta and left ventricle of the heart were injected. *Microscopical Examination:* first fœtus, negative results; second fœtus contained the blue; third fœtus contained the blue; fourth fœtus contained blue granules; fifth fœtus also had the blue in it. Placenta contained the blue granules, as did the cord.

Experiment XVIII.—Both jugular veins of a pregnant rabbit were injected with the ultramarine liquid. About five hours after the injection the animal was killed. Examination of the four fœtuses gave the following results: first fœtus contained the blue; second fœtus, blue found in this one; third fœtus, this one contained the blue, it being found

especially in the liver; fourth fœtus, negative results; placenta contained the blue, while the cord did not.

Experiment XIX.—Both jugular veins of a pregnant rabbit were injected with the ultramarine liquid. The animal was killed in six hours. *Microscopical Examination:* the blue was found in all the maternal tissues; also in each of the three fœtuses; placenta and cord both contained the blue granules.

It will now be readily seen that the entire number of experiments undertaken with the ultramarine liquid was nineteen, and of these, sixteen were more or less successful, three only being entire failures. I may further state that, owing to many causes not under my control, a number of other experiments were lost.

(To be continued.)

A CORRELATION THEORY OF COLOR-PERCEPTION—A PRELIMINARY NOTE.

BY CHARLES A. OLIVER, A.M., M.D.,

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FROM time to time, various theories of color-perception have been promulgated, each based upon an endeavor to harmonize an arbitrary and unscientific naming of visible color with a gross, unnatural division of nerve-fibre. Accepting, as we must, the Huygenian hypothesis of the imponderables, and that the peripheral portion of the human visual apparatus is adapted to the receipt of undulations equivalent to those existent between the extremes of natural color-vibration, we are brought to a third assertion, that as all natural imponderable stimuli are the resultants of a mere difference in the number of vibrations of one and the same ether, the organs for the receipt of the different varieties must be but analogues and modifications of each other. This can be readily proven by a comparison of the senses. How absurd it would be to attempt to apply either Young's or Hering's theory of color-perception to the sense of touch, or with similar imaginative theorems for musical tones or chosen odor names, when we have the difference in response dependent upon a difference in cause acting upon an ever-ready material; a difference in the character of natural impression affecting the same character of organic element to a greater or less degree, producing exact and equivalent results. Each and every optic-nerve fibre-tip has a

receiving power equal to its individual vital strength; each and every healthy optic-nerve filament transmitting to the color-centre, for recognition, nerve-energies equal to as many special sensations as its peripheral tip is capable of receiving. The innumerable quantities of nerve-filaments placed side by side on a sheet or membrane, serving to give greater field and allow many colors to be seen at one and the same time, thus make our every-day and momentary picture. Therefore, the most rational theory that can be brought forward is, that color-perception takes place in each and every optic-nerve filament, and consists in the passive separation of a specific nerve-energy equal to the exposed natural color, from a supposed energy-equivalent resident in the nerve-tip, by an active chemico-vital process of the impinging natural vibration upon the sensitized optic-nerve tip; the separated energy being transmitted to the color-centre, where it is recognized. The healthy nerve-tip returning to its energy-equivalent the moment the specific energy, separated by the received natural vibration, has been forwarded for recognition, when it is again ready to receive any other natural color-vibration that may be cast upon it.

By the title it will be seen that it is the intention of the author to discuss this theory more at length. He sends this forward not as a preconceived notion, but as the result of much thought and careful experiment. The extended reasons and the details of both physiological and pathological research, he has combined in a paper which will be soon ready for publication, as it is his firm personal conviction that color-perception, which is the only sensory office of the visual apparatus in itself, is the result of an action of natural color-vibration upon a series of identical physical nerve-elements of relative powers, so modified from the simpler though correlative sensory forms as to be able to respond to undulations equal to those that are productive of natural color. The difference in the amounts of the perceived color being dependent entirely upon the ability of one and the same perceiving element to give answer to the number of vibrations necessary to the production of those colors. The response consists in three separate and distinct factors—receipt, conduction, and mentality (sensation, transmission, and perception). The

first resident in the eye itself; the second in the optic nerve; and the third in the cerebral color-centres. Each and all of these are dependent upon a specific vital energy, causing true molecular change.

1507 LOCUST STREET.

TRANSLATIONS.

PEPTONURIA AS A SYMPTOM OF DIFFERENT DISEASES.—The following conclusions, taken from the work on this subject by Dr. Fenomenow, have great importance for the practising physician:

1. Peptonuria always occurs in the final stage of croupous pneumonia, and is in direct relation to the absorption of the croupous exudation.

2. The presence of peptone in the urine in cases of nephritis is perhaps dependent on the peptonization of the tubercasts.

3. In pulmonary phthisis, the peptonuria is dependent not upon the extent of tissue implicated, but upon the rapidity of the destructive process.

4. In typhoid fever accompanied by constipation and a temperature above 40° C., peptonuria is a frequent appearance.

5. Occasionally peptonuria occurs in scarlet fever, in exudative pleurisy, in nephritis, in puerperal disease, and in disturbances of compensation in heart-diseases.—*Deutsche Med. Zeitung*, May 8, 1884. S.

COEXISTENCE OF BOTHRIOCEPHALUS LATUS AND TÆNIA SOLIUM.—Dr. Brandt, of St. Petersburg, reports in the *Russkaja Meditsina* a case of a soldier's widow who had symptoms of tænia. Her diet was principally ham and fish. Two drachms of ethereal extract of male fern caused the discharge of two bothriocephali lati and one tænia solium. A similar case is mentioned by the reporter in the *London Medical Record* for April 15.

AORTIC LESION PRODUCING A SYSTOLIC MURMUR AT THE APEX.—Dr. Weill calls attention to the fact that whereas the custom of localizing murmurs by their external point of greatest intensity is generally correct, there are exceptions to the rule. He reports a case in which atheroma of the aorta and diseased sigmoid valves caused a systolic bruit over the apex, the mitral leaflets being normal.—*Revue de Médecine*, March.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 28, 1884.

EDITORIAL.

HYGIENE OF SUMMER TRAVEL.

THE migratory impulse which seizes upon all true Americans, especially at this time of the year, leads a very large portion of them in every community to seek to leave home for a more or less protracted period of time, and to undertake journeys of varying length, during which they intrust their life, liberty, and property to various corporations who furnish trains, steamships, and hotels for their accommodation.

In the course of these journeys acquaintance is often made with new scenes and unfamiliar surroundings, and experience is enlarged, at greater or less cost to the individual, in many directions. If all the disagreeable possibilities of travel were taken into consideration,—the disasters by rail, the wrecks by sea, the unwholesome and badly-prepared food, the strange beds of unknown history, the contagion in waiting-rooms, the malaria acquired by night travel through swamps, the infection lurking in carriages, the lightning-stroke, and the many moving accidents by flood and field,—it is probable that the propensity to journey from home would be measurably checked, and that many would endeavor to put up with the ills they have, rather than fly to others that they know not of. With the hopefulness of the race, however, these disadvantages are almost universally ignored, and the risks taken deliberately, in view of the many advantages to health arising out of a change of air and scene and the escape from the ordinary routine of existence.

Apart from these ordinary accidents, which, although relatively rare, should be

considered as part of the risks of travel, there are individual possibilities which should not be omitted from consideration in preparing for a summer tour. A certain proportion of those who leave home will be taken sick *en route*, from causes which were latent on starting, such as typhoid fever, or which were progressing unobserved, such as apoplexy, uræmia, or diabetic coma. The recent and lamented death of the eminent Prof. A. Wurtz, of Paris, was due to blood-poisoning following voluntary retention of urine for several hours, owing to the want of convenient opportunity for evacuation of the bladder during a somewhat prolonged railway-journey. To those who expect to travel in Europe this will suggest the carrying of a rubber urinal or bottle which might be used in case of need. If the demands of nature were considered as being more imperative and obeyed more willingly when travelling, much suffering and sickness would be averted.

The possibility of sudden unconsciousness during a journey makes it advisable to have the name and address of the friends of the individual, not only in the pocket-book, for this might be stolen, but elsewhere upon the person, so that they might be promptly notified in such an emergency.

The *British Medical Journal*, some years ago, announced to the travelling public that safety from the typhoid-contaminated water of the wells of Europe consisted only in the exclusive use of water obtained from a reliable source, such as the Apollinaris. Allowing for some exaggeration, this warning is well founded, and should be reiterated. We would also direct attention to the fact, now generally admitted, that ice may be contaminated as well as water. In this country it is not likely that any large proportion of the travelling public will take such a precaution, and in consequence many will suffer from bowel disorders due to the "change of water." When this occurs, it is proper to restrict the drink to water which

has been boiled, and cooled by being placed in bottles *on* the ice, not by putting pieces of ice *in* it. Cold tea also answers a similar purpose. The habit of its use in China probably in this way became universal there on account of the pollution of the water-supply by the filthy mode of living of the natives.

In case of sickness in a strange hotel it is better to obtain the opinion of a good druggist as to the physician to select, than to follow the (too often interested) advice of the hotel-keeper or clerk. Even in the principal cities of this country the physicians to the hotels do not always owe their connection to their merit; but in Europe the combination of the hotel-keeper and the physician often amounts to little better than a conspiracy to defraud the sick stranger. It is better, very often, for the traveller to apply for treatment at a large hospital than to be subject to extortion and ill treatment in a hotel, where usually there are scanty conveniences for treating the sick.

A small stock of medicines will prove useful in preventing illness: seidlitz powders, cathartic pills, brandy, cholera-mixture, paregoric, aromatic spirits of ammonia, soda-mint, ginger, a few opium suppositories, quinine pills, and prepared mustard-leaves, will often be of inestimable value in emergencies. If, with these at hand, due regard be paid to regularity of habits, maintaining, as nearly as possible, the hours for eating and sleeping to which one has been accustomed at home, and due attention to nature's needs, avoiding too much fatigue, and paying proper attention to clothing, the traveller may indulge the promptings of the Berserker spirit that lingers in his blood, and may wander far in quest of health and pleasure, to return, when the summer solstice is past, with renewed vigor to resume his daily tasks, often to find them lightened, since to his increased physical strength they are less burdensome.

THE STUDY OF RABIES BY PASTEUR.

BY invitation of M. Pasteur, a commission has been appointed to test the validity of his claims, about which there has been some misunderstanding, owing to the zeal of the reporters for the daily papers. In a recent communication, Pasteur has denied the sensational statements of the public press that he had discovered and isolated the *materies morbi* of rabies, and that he had promised to grant immunity to the human subject from natural rabies by preventive inoculation. His claim was simply that, from the results of many experiments, he had found that the brain of a mad dog pre-eminently contains the morbid poison, and that, inoculated into apes, the poison becomes successively less and less active; while on the contrary, if rabbits be used instead of apes, the poison becomes more virulent; by combining the two methods he obtained virus of different degrees of strength. He claimed, further, that the injection of the modified virus under the skin of a dog will not give him rabies, but will render him proof against subsequent inoculation with virulent matter or the bite of a mad animal.

The Minister of Public Instruction of Paris has been invited to superintend the following experiment: M. Pasteur will by previous inoculation render twenty dogs insusceptible to rabies, and these, with twenty others unprotected, will then be bitten by mad dogs; and it is confidently predicted that the first twenty will enjoy entire immunity, while the second series will all die of rabies.

We have no doubt that the result will be just as M. Pasteur says it will. From our previous knowledge of the subject, however, we should have thought that all of the twenty dogs of the second series would not acquire rabies, and certainly that it would not be uniformly fatal; for

we did believe that a large proportion of animals bitten by a rabid dog escape the disease. Even animals that are inoculated with fresh, warm saliva from the mouth of a rabid dog do not in all cases contract rabies, and the susceptibility varies in different species.

But "they do these things so much better in France" that we shall not be surprised to learn that the experiment has been pronounced a brilliant success. We shall, however, reserve final judgment as to the value of preventive inoculation for rabies until these claims receive confirmation from independent observers. We hope soon to learn what results will be obtained by Dr. Klein, of London, from repeating these experiments. In the mean time, we can hardly agree with the *Lancet* that rabies is defeated.

THE ADMISSION OF WOMEN PRACTITIONERS TO THE MASSACHUSETTS MEDICAL SOCIETY.

THE Massachusetts Medical Society, at its one hundred and third annual meeting, held in Boston, June 11, among its other interesting and important business, adopted the following amendment to its by-laws, on motion of Prof. Bowditch:

"Candidates for admission into the Massachusetts Medical Society may be either male or female, and every candidate must, by proper credentials and examination, satisfy the Censors of said Society that he possesses the following qualifications for fellowship," etc.

While the passage of this amendment reflects credit upon the Society as an act of justice to a small class of legally qualified medical practitioners, yet there seems some ground for a fear that, in a long-established and wealthy community, the admission of women to the medical societies on equal terms with men will encourage a class of *dilettante* doctors,—women who enter at

medical schools as a relief from china-painting and South Kensington art-work and other like serious pursuits, and who receive a diploma in due course, without having any real appreciation of the dignity or the duties and responsibilities of the medical degree. Such practitioners, having very limited views of the domain of medicine, are too apt to become sectarians or specialists and indulge in irregular practices which bring discredit upon the profession. It is unfortunate that the offences of these individuals have been visited upon others who are earnestly striving to maintain an honorable position in the ranks of the profession, but it is certainly the case; and the task of distinguishing between the reputable and unworthy is so difficult that it has caused some medical societies to refuse women admission altogether to their meetings. Such a course works injustice to the few, but protects important interests that are threatened by the admission of the many. The problem is how to exclude the unworthy and yet not deprive others of their rights as members of the profession.

In view of the difficulties which beset the question of the general admission of women to our medical societies, it might be expedient to increase the standard of age, requiring each applicant to be at least thirty years of age and to have been at least five years engaged in the actual practice of his profession. It is also important, as a matter of record, that the date of birth should be entered upon the application for membership and be entered on the minutes of the Society. It may be set down as an assured fact that practitioners of medicine who would object to respond to such a requirement are unworthy of a professional passport.

THE *Medical World* has issued a valuable chart of urine-analysis as a premium for new subscribers. The *World* and the chart for one dollar.

NOTES FROM SPECIAL CORRESPONDENTS.

LOUISVILLE, KENTUCKY.

DEAR SIR,—While the profession of Kentucky is apparently enjoying a holiday, the surface of the placid stream of professional events has recently had the slightest ripple to cross its bosom, occasioned by the meeting of the State Society. At Bowling Green—that lovely little city in the southern part of this grand old commonwealth—there assembled, on June 3, a large number of her medical practitioners, and the 5th brought the closing ceremonies and festivities of a profitable and harmonious meeting, the 6th a gathering of grip-sacks and a rustling of rejuvenated feet to catch the early train, some for home, business, pills, and powders, others to continue a pleasant visit by an excursion to Mammoth Cave. A review of the current topics, good, bad, and indifferent, as discussed in the meeting, may not be uninteresting, and (your consent already obtained by letter) I shall do them in short order.

The literary exercises of the meeting were begun by the report of the Committee on Medical Ethics, by Dr. Andrew Seargent, of Hopkinsville. No discussion followed its reading, from which the legitimate inference may be drawn that the views of the writer were not precisely in harmony with the sentiment pervading the general mind.

A general dislike to chloral seems to be springing up among the best practitioners, and many wishes for something more efficient and less treacherous to substitute for it were expressed. Hyoscyamin received, likewise, adverse criticism. Kairin as an antipyretic was regarded as inferior to salicylic acid and quinia, and only efficient in dangerous doses.

"The Modern Theory of the Nature of Glaucoma" was ably presented in a paper by Dr. R. M. Ferguson, of Louisville, and the singular statement made in the discussion by Dr. A. W. Johnstone, of Danville, that seventy per cent. of the cases presenting at the clinics in New York occurred among the Jews. This was regarded by some as susceptible of explanation only upon the ground of "personal peculiarities, or the fact that they do not eat pork."

Since the question of anæsthesia is one of ever-present importance, and just now undergoing considerable discussion in reference to its induction by the rectum, the occasion may be opportune to note that Dr. A. M. Vance, of Louisville, has suggested a modification of the usual induction of local anæsthesia, in this, that he has found that the skin loses its susceptibility to pain a very few seconds after the ether-spray begins to fall upon the part. Recognizing this, he has been able to begin cutting without at all freezing the parts. Under this application of it a tracheotomy has

been successfully performed, an eye enucleated, a fibrous tumor removed from the sacrum of a man, and tenotomies frequently performed, without the patients' being aware that the operations had been begun.

In response to a question as to its action upon mucous surfaces, Dr. J. M. Mathews, of Louisville, said he had hailed this announcement by Dr. Vance with no little degree of satisfaction; that he immediately put it in practice in applying ligatures to hemorrhoids in four or five cases, but, judging by his experience with them, the number would not be materially increased.

In the report of the Committee on Improvements in Surgery, by Dr. L. S. McMurry, of Danville, the writer called attention to the very confident views expressed by the late Dr. Marion Sims in 1882, which he thus quoted: "I have the deepest conviction that there is no more danger of a man's dying from a gunshot or other wound of the peritoneal cavity properly treated, than there is of a woman's dying of an ovariectomy properly performed;" and remarked that in the able paper of Dr. Parks, recently given to the profession, on this subject, this statement of Dr. Sims was deemed prophetic.

Dr. D. W. Yandell, of Louisville, objected to this view *in toto*, as not expressing the real condition of our resources. He said, "Of six cases of gunshot wounds of the abdomen, four will die,—one of peritonitis, two of hemorrhage, and one of septicæmia. Twice as many will die of hemorrhage as anything else. In ovariectomy there is this advantage,—that, while you expect hemorrhage, you know when and where it will probably occur, and are prepared to meet it. This declaration of a great man, published in a moment of enthusiasm, is misleading. It is not borne out by facts, nor likely to be."

Dr. Stone, of the Western Kentucky Lunatic Asylum, emphasized the importance of the most complete thoroughness in the diagnosis of abdominal tumors, by the relation of a case in which several eminent men had figured, one after the other of whom had been led to concur in a diagnosis of ovarian tumor and the advisability of immediate operation. By repeated examinations, in which the sound was used, abortion was finally produced the day before that set for the operation, the patient giving birth to a six-and-a-half-months' child, which died the day following.

In commenting on the subject, Dr. D. W. Yandell related two or three such cases, as illustrative of mistakes that may occur. He said, in substance, "Professors Miller and Bayliss diagnosticated an abdominal tumor to be ovarian, and not until the woman gave birth to a child was their mistake discovered. Some years afterwards, a woman came from Mobile. She was a widow. She had a tumor. Parvin saw it, Miller saw it, Thomas saw it. All declared it to be a fibroid. In the fall she

gave birth to a child. Four years ago I saw a case of an enormous tumor,—pronounced by myself, Parvin, Samuel Gross, and other experienced men to be a fibroid. Time went on: she got some muriate of ammonia and ergotin, and one night, about a year ago, she was seized with all the symptoms of peritonitis, collapse, and shock, and the gentleman called to her tapped her as the only likelihood of affording her relief. He drew off an enormous quantity of fluid. It refilled. I saw it, and operated upon her; and, although the operation was easy as it was possible to do, the woman died. Such cases show simply that the wisest and most experienced men make mistakes."

The most interesting feature of the meeting was the discussion of the treatment of typhoid fever, brought about by a paper on that subject by Dr. Pinckney Thompson, of Henderson. He advocated—1st, that the early treatment of a suspicious case should be that indicated for malarial fever. Eliminating in this way malarial fever, the remainder of the treatment resolves itself into controlling the temperature,—for which he preferred the sponge-bath to everything else,—and supporting the heart in the later stages by means of the systematic employment of alcohol. For the bowel complication, belladonna holds a high place in his estimation, especially in connection with phosphoric acid as an antipyretic.

Dr. William Bailey, of Louisville, thought no man ought to reject quinine as an antipyretic until he had used it in antipyretic doses.

Dr. J. A. Larrabee, of Louisville, thought that while salicylic acid and quinia were undoubtedly powerful agents in reducing temperature, they reduced it at the expense of the circulatory system.

Dr. D. W. Yandell, of Louisville, contrasted the treatment of twenty-four years ago with that prevailing at the present time, bringing out his objections to the use of quinine in this disease.

While he recognizes the value of keeping down the temperature, and values the wet pack or warm bath for that purpose, he deplores the tendency to over-feed typhoid patient. He has made it a rule, in the last five cases he has treated, to be governed in his administration of food by the desires of the patient. He has found the diarrhoea to be less formidable, and has noticed no tendency worthy of mention to exhaustion from this want of support. One of his cases passed seventeen days without food, taking in that time only two or three glasses of water. On the twelfth day a slight diarrhoea was manifest, for which the patient got some chalk-mixture, which proved to be sufficient to control the bowels. When convalescence began, his recovery was more rapid than usual. He thought quinine served a good purpose in

convalescence when the elevations of temperature begin to occur periodically.

Dr. A. W. Johnstone, of Danville, read a very interesting paper on "Bigelow's Lithoplaxy." He compared it with lithotomy and lithotripsy, showing the superiority of the former. He exhibited Bigelow's apparatus for drawing the fragments out of the distended bladder, and demonstrated its action.

Dr. Dudley S. Reynolds, of Louisville, in speaking of "Inflammation of the Iris," emphasized the importance of local treatment to dilate the pupil in all the various forms. This is the first, the immediate, the important thing to do. Then institute such measures of treatment as the constitutional condition may demand,—salicylate of soda if rheumatism be present, iodide of potassium if syphilis. If it be due to traumatism, be guided by the rules which govern the treatment of all wounds. The agent which he recommends for producing prompt dilatation, and which he regards as greatly superior to atropia, is the hydrobromate of homatropine.*

Dr. W. M. Fuqua, of Henderson, read an exhaustive paper on "Civilization and Sanitation." He maintained that the origin of the great majority of diseases is centric, not eccentric, and that the modern theory of sanitary science is unsound.

Dr. T. D. Finck, of Louisville, read a paper on "Phlyctenular Keratitis." He regards the herpes which appear at the cornea-conjunctival junction as due to the deliquescence of lymphatics in this situation securely bound down to the sclerotic, whereas they lie in a closely-bound conjunctiva in other parts of the eye. This deliquescence is brought about by hyperdistention and consequent rupture of the lymphatics, which, in turn, is due to obstruction of the lymph-channels from hyperlymphosis. Out of this he evolves the indication of treatment,—defibrinization of blood by syrupus ferri iodidi, and minute doses of calomel.

Dr. William Cheatham, of Louisville, advocates delay in the enucleation of a diseased eye when it is causing sympathetic ophthalmia, saying that he has succeeded in curing several cases without enucleation.

Dr. J. M. Mathews, of Louisville, made some remarks upon the subject of "Operations upon Hemorrhoids during Inflammation." He now departs from the time-honored principle of not operating upon inflamed structures, and never waits for the inflammation of a pile to be subdued by local treatment before operating upon it. He cited several cases as illustrative of the wisdom of the practice.

It was a matter of considerable solicitude among some of the members of the Society to discover whether it was proper, in operating upon a man, to take his whole pile or

* This paper appears in full in this issue. (See p. 705.)

divide it with him [diagram furnished on application]. Dr. Mathews replied that it was right and proper to take all the pile in sight.

Dr. Pinckney Thompson, of Henderson, was elected President for the ensuing year.

The next meeting will be held at Crab Orchard Springs.

Resolutions of respect for the late Prof. Samuel D. Gross, first President of the Society twenty-nine years ago, were adopted.

A committee to consider appropriate legislation, and to urge its passage by the Legislature, for the suppression of quackery, was appointed.

The justly-celebrated hospitality of the well-bred Kentuckian suffered no discredit at the hands of the local profession and the people of Bowling Green.

ALLEN KELCH, M.D.

PROCEEDINGS OF SOCIETIES.

AMERICAN NEUROLOGICAL ASSOCIATION.

THE Tenth Annual Meeting was held at the hall of the New York Academy of Medicine, June 18, 19, and 20, 1884.

In the absence of the retiring President, Dr. EDES, the Vice-President, Dr. MORTON, called the Society to order, and said that, looking over the year's work, we could justly say that neurology, as represented by this Association, had not taken a backward step. He then made a brief retrospect of the valuable work done by the specialists in this department. As an evidence of increasing interest, he presented a recent journal of large size, devoted to the subject of neurology, published in the Russian language, and then introduced the President-elect, Dr. ISAAC OTT, of Easton, Pennsylvania.

Dr. OTT briefly thanked the Society for the honor conferred upon him, and then submitted for their consideration the special subject to which he desired to invite their attention:

THE PATHS OF THE VARIOUS FIBRES IN THE SPINAL CORD.

It is about seventy years since Charles Bell announced that the anterior roots of the spinal cord were motor and the posterior were sensory. The physiology of the cord as taught to-day was mainly due to perfection in the *technique*,—that is, the use of immovable directing knives and the subsequent microscopic examination of the hardened cord,—points which had been neglected by Schiff and Brown-Séquard. After numerous experiments, Longuet arrived at the conclu-

sion, in 1840, that the anterior columns were motor and the posterior sensory. Brown-Séquard also, after numerous experiments, believed that the transmission of sensory impressions in the cord took place chiefly through the gray matter and partly through the anterior columns; that the voluntary impressions in the upper part of the cervical cord were in the lateral columns and in the gray matter between them and the anterior columns; that no tactile sensations ascended the posterior columns to the brain. He made at least seven different kinds of sensation conveyed upward. But he had since somewhat modified these views. Prof. Schiff thought that the posterior columns conducted tactile impressions, that the gray matter conducted in all directions afferent impulses which give rise to affections of general sensibility and such efferent impulses as were paths of reflex action. Dr. Ott mentioned these facts to show that they were greatly in need of correction.

The author then referred to the experiments of Ludwig, Fick, his own, and others, and arrived at the conclusion that the lateral columns conducted sensation and motion; the gray matter did not directly participate; the anterior columns conducted voluntary motion; tactile sensations also passed up the posterior and lateral columns; the different nerve-tracts crossed one another.

The Secretary and Treasurer and Council read their reports.

The following officers were then elected:

President.—Burt G. Wilder, of Ithaca, New York.

Vice-President.—Leonard Weber, of New York.

Secretary and Treasurer.—Graeme M. Hammond, of New York.

Council.—W. R. Birdsall and W. J. Morton.

Dr. B. G. WILDER then made a communication and gave an exhibition of preparations illustrating (a) the existence and circumscription of the portæ (foramina Monroi) in the adult human brain; (b) the presence of the crista fornicis in fetal and new-born human brains; (c) two additional cases of absence of the callosum in the domestic cat; (d) the covering of the cerebellum by the cerebellum in a young chimpanzee whose brain was hardened within the skull.

Dr. R. W. AMIDON presented a human brain in which there was absence of the callosum, and said he would read the history later.

Dr. SPITZKA said it was an error to suppose that a preponderance of the cerebrum over the cerebellum was, *per se*, an indication of high development. On the contrary, the cerebellum, being situated midway, so to speak, of fibres to be finally transported to the cerebrum, forming a depot for the higher centre, it stood to reason that, if any relation

existed between them, both must progress evenly.

Dr. WILDER said his object in presenting the specimen was to illustrate the importance of making anatomical preparations in a manner not to misrepresent the facts, and thus avoid false conclusions and unnecessary discussion.

The Society adjourned, and met again at 8.30 P.M.

EVENING SESSION.

The report of the Committee on the Hammond Prize Essay was read. But one essay had been presented, of which, in a lengthy report, the committee spoke in most commendatory terms, but decided not to give the award.

The members present being of the opinion that the conclusion arrived at by the committee was not in harmony with the body of the report, it was, on motion, referred back for further consideration.

Dr. A. D. ROCKWELL read a paper entitled

A CASE OF TONIC SPASM OF THE DIAPHRAGM (?).

He presented the case because it was unique, and because of its obscure pathology. Mrs. X., aged 35, mother of four children, began first to complain of paroxysms of distress some twelve years ago. Their recurrence was marked by uncertain and varying intervals. Before January, 1884, they seldom occurred more than once a year, and sometimes there was an interval of two or three years between the attacks. Since then the attacks had become quite frequent, sometimes as often as twice a day. The patient was awakened from sleep by a vague feeling of pressure and distress at the lower end of the sternum and over the epigastrium, extending to the back. It was as if the front and back were being pressed or pulled together. The patient believes this can be due to no other cause than a spasmodic contraction. The recumbent position was impossible; the patient moved about the room in a bent posture, or leaned forward against a support, making short and gasping inspirations. The countenance was pallid, and agony was depicted on every feature until the condition was relieved by an anæsthetic. The pulse became weaker and somewhat frequent, but was not irregular. The attacks lasted from a half to three-quarters of an hour. The patient quickly rallied after the attack, but a bruised and sore feeling remained many hours later. Many efforts had been made for her relief. Electricity had been tried in all its forms, but treatment had been without avail until a month ago, when the actual cautery was used, and there had been no attack since, and the general health and strength had shown steady

improvement. Gall-stone had been excluded as the cause. The heart had been pronounced sound, and no other organic disease had been detected. The patient had suffered at various times from muscular rheumatism, but rheumatism of the diaphragm would not account for the symptoms described.

Dr. Rockwell believed that the symptoms were due to spasmodic contraction of the diaphragm, notwithstanding the absence of certain objective symptoms, such as expansion and immobility of the lower half of the chest, projection of the epigastrium, and closure of the œsophagus.

The lecturer also referred to a case of supposed organic stricture of the œsophagus relieved by the cautery to the spine.

Dr. DANA asked whether angina pectoris had been excluded, and said that it seemed impossible for the diaphragm to be tonically contracted without there being protrusion or tension of the abdominal walls. If there were tonic contraction of the diaphragm, the œsophagus would be closed, so that swallowing would be impossible.

Dr. BIRDSALL asked whether hysteria and hepatic calculi could be excluded.

REMARKS ON MICROSCOPIC ENCEPHALIC NOMENCLATURE.

Dr. B. G. WILDER read a paper upon this subject. Like former studies of the subject by the same anatomist, the general purpose of this paper was to facilitate true advancement and discrimination of our knowledge of the coarse anatomy of the brain. He presented the difficulties of the ponderous terms now employed. He regarded the adoption of technical brief monomial terms, most of which might be had by subjecting those in common use to abbreviation, translation, and combination, as an advantage. He also urged that more frequent and systematic use be made of the various methods of classifying the encephalic parts, and thus their names, in accordance with true segmentation of the organ, its formation by cavities and parietes, the division of the latter into commissures, etc., and especially the recognition of certain parts, as hypertrophied, atrophied, and marginal (tænia, fimbria, crista, etc.). Specific recommendations were—(1) the substitution of mesen, proën, etc., as abridgments (not abbreviations) of mesencephalon, proëncephalon, and their segmental names; (2) the designation of the ventricles by the Greek *κοιλια* (cœlia) in composition with the segmental prefixes, which would require meso-cœlia (mesocele), etc. In this connection, attention was called to the substantial coincidence of Prof. Wilder's series of cœlian names (first published in March, 1881) with the names more recently proposed by Prof. T. Jeffery Parker.

Remarks upon the paper were postponed until the next afternoon.

THURSDAY (SECOND DAY).—AFTERNOON SESSION.

The Society was called to order at 2.30 p.m. by the President.

Dr. W. A. HAMMOND stated, with regard to the prize essay bearing his name, which had been brought up at the previous session, that it certainly had not been his intention to offer the prize for any essay upon the functions of the optic thalamus, especially as based upon experiments on animals, but rather for a valuable and original contribution upon the function of the thalamus in man.

Discussion of Dr. Wilder's paper on the subject of encephalic nomenclature was then taken up, and was participated in by Drs. Dana, Birdsall, and Wilder.

Dr. WILDER presented the following resolutions, which, on motion, were ordered to be acted on upon Friday:

"Resolved, That, in the opinion of this Association, the advancement and dissemination of accurate knowledge of a true macroscopic anatomy of the brain will be facilitated by substituting for many of the polynomial terms, technical and vernacular, now in use, technical names which are brief and consist each of a single word.

"Resolved, That we recognize the advantages of using such monomial compound terms as antiplexus, diatela, meso-coelia, hemi-septum, præ-commissura, medipedunculus, portcornu, and cognate words, proposed by Prof. B. G. Wilder, and see no serious objection thereto.

"Resolved, That there be appointed by the chair a Committee of Macroscopic Encephalic Nomenclature, with instruction to report at the next meeting a list of such terms as, in their judgment, may properly be recommended for use."

CAN LOCOMOTOR ATAXIA BE CURED?

Dr. G. M. HAMMOND read a paper with this title. A few years ago, when a member of the medical profession announced that he had cured a case of locomotor ataxia, his statement was not received with a great amount of interest. Belief in his views was not entertained for a moment. It was absurd even to talk about curing ataxia, and the physician was regarded as having made an incorrect diagnosis, or there was an intimation that the disease was cured at a very opportune moment. The pathological conditions found in the spinal cord of persons who had died while suffering from ataxia seemed to warrant the view held by the majority of physicians, that a cure of this affection, and of all similar ones, such as sclerosis of different parts of the cord and brain, was an impossibility. But, as time passed, there were published in the journals reports of cases cured by men in the profession, many of them of such undoubted learning and high reputation that we could

not afford to overlook them. The question then arose, were these true cases of ataxia, or was there some other morbid condition of the spinal cord which, when present, gave rise to symptoms similar in every respect to those resulting from sclerosis of the posterior columns? Dr. Hammond had been able to collect a few cases of undoubted cure of what was supposed to be locomotor ataxia. Different methods of treatment had been employed.

Case I.—Dr. Hammond was fortunately able to present the patient again whom he had presented to the Society at its previous meeting. He then exhibited him as a case of locomotor ataxia cured, and he was able to say that the cure had so far stood the test of time. His history was as follows. Ten years ago the man came under the care of Dr. James Anderson, of this city, for a lesion of the glans penis. Dr. Anderson was unable to say at that date whether it was a chancre or a chancreoid. No secondary symptoms were ever apparent. He had been a drinker for several years, seldom getting on a spree or becoming intoxicated, but taking many drinks every day. In the winter of 1882 he went on a spree which culminated in an attack of delirium tremens. Following this attack the permanent symptoms of ataxia appeared. Though for the previous six months he had complained of sharp itching pains in the legs and slight difficulty in walking, he was now unable to stand without a support. His walk, when assisted, was characteristic of ataxia. There was loss of the tendon reflexes, difficulty in retaining the urine, anæsthesia of the lower limbs. The arms were somewhat affected, and there was partial loss of sight. Dr. Anderson prescribed iodide of potassium and bichloride of mercury, and referred him to Dr. Hammond for further treatment. Dr. Hammond applied the actual cautery several times to the spine, together with dry cups, ether spray, static and galvanic electricity. During this time the patient began to improve, and when he was exhibited before the Society a year ago he was apparently perfectly well, and walked correctly. He could stand with his eyes closed, and jump on and off the car while in motion. The tendon reflexes had returned. The patient had had no treatment since. He drank no wine or liquor in any form; he was stouter and seemed to be in better condition than he had been at any time for years.

Case II.—This case was reported by Desplat, of Lisle. The patient was a man, 54 years of age, who had contracted syphilis twenty years previously. For five years he had shown symptoms of locomotor ataxia, such as plantar anæsthesia, loss of the idea of the exact position of the limbs, partial anæsthesia of the upper limbs, absence of the tendon reflex, and incoördination. He was treated with Gibert's syrup and mercurial fric-

tion. In five days it was apparent that there was an amelioration of the symptoms, and in five months the cure was complete.

Case III.—This was the case of a man who consulted Dr. W. A. Hammond two years ago. All the symptoms of locomotor ataxia were present. The patient was unable to stand with the eyes closed. The tendon reflex was absent. He was unable to hold his urine for any length of time, having to pass it as often as forty-five times a day. Anæsthesia was present, and the passage of sensory impression through the cord was considerably prolonged. A specific history was admitted. Dr. Hammond treated him with the iodide of potassium and bichloride of mercury, alternated occasionally with nitrate of silver. The actual cautery was applied to the spine, together with dry cups; the ether spray and galvanism were employed; improvement was gradual, but steady; the anæsthesia disappeared; he began to walk better; the urinary symptoms improved. The tendon reflexes did not return. In a letter dated May last the patient stated that he had not enjoyed as good health for years; he was completely cured of the locomotor ataxia; he had no difficulty in walking or standing in any position, and he felt equal to any physical exertion. So far as his bladder was concerned, he hardly knew that he had one.

Case IV. was reported by Frederick Schultze. The patient was first seen by Erb in 1871. He was then 43 years of age, and had been suffering for two or three years with lancinating pains in the lower extremities. For a year he had been unsteady on his legs, and had suffered from inability to retain his urine. These symptoms gradually increased in severity; the patient was unable to walk in the dark; was unable to retain urine at night. Under the use of nitrate of silver, the difficulty in retaining the urine was somewhat improved, and he became better able to stand with the eyes closed. In April, 1871, the galvanic current was used. He then improved in his powers of locomotion until the eyes could hardly perceive any abnormality in his gait. All of the symptoms gradually disappeared, until, in 1873, he was considered perfectly well. He remained well up to the time of his death, which occurred suddenly during an attack of acute intoxication. Just previous to his death, Dr. Schultze saw him, and noted that the gait was perfectly normal, sensibility intact, the patellar tendon reflexes normal. There was slight anuresis both night and day. Nine hours after death an autopsy was held, at which the spinal cord was found to be small and soft. There was diffuse degeneration of the posterior columns in the lumbar region, and degeneration of the outer division of the posterior columns of the dorsal region, and slight degeneration of the columns of Goll.

Dr. Hammond thought this a most remarkable case. How it was possible for sclerosis

of the posterior columns to exist without the manifestation of any symptoms of ataxia except of slight anuresis, could be accounted for only in one way. In such cases we are forced to conclude that some other condition of the spinal cord coexisting with, or occurring distinctly from, sclerosis, was capable of producing the majority of the symptoms of ataxia, and that this morbid state, under certain conditions, was capable of being removed by appropriate treatment. In support of this view, Dr. Hammond cited three more cases.

Case V.—Desnos gave the history of a characteristic case of ataxia, and at the autopsy it was found that the cord was very intensely congested, but not the slightest evidence of sclerosis of the posterior columns or any part of the cord could be discovered.

Case VI.—The same authority referred to the case of a man, 24 years of age, who had contracted syphilis several years before. He was also exhausted by sexual excess and literary pursuits. Desnos made a diagnosis of ataxia, and prescribed protiodide of mercury, iodide of potassium, and bromide of potassium. At the end of five weeks the patient showed considerable improvement, and soon afterwards he was regarded as completely cured. Desnos regarded this as a case of congestion of the spinal cord.

Case VII.—This case was reported by Dr. Lyman, of Chicago. The patient consulted him in 1879, suffering from lightning-like pains in the legs, anæsthesia, hyperæsthesia, and analgesic patches on both limbs. The tendon reflex was absent. The ataxic gait was marked. There was loss of co-ordination in the upper extremities, inequality of the pupils, and choked disk. Treatment failed to give relief, until, at the advice of some friends, the patient used Junod's boot. From this time he began to improve, and finally was nearly completely cured, being able to walk well and rapidly without a cane, and the bladder and other symptoms disappearing.

From a study of these cases Dr. Hammond drew the following conclusions:

First, that sclerosis of the posterior columns of the cord might exist without any prominent symptoms.

Second, that congestion of the posterior columns might exist and give rise to most if not all of the symptoms of ataxia.

Third, that it was impossible, during life, to make a differential diagnosis between posterior spinal sclerosis and posterior spinal congestion.

Fourth, that congestion of the posterior columns of the cord was amenable to treatment.

Fifth, there was no evidence that sclerosis, when once existing in the spinal cord, had ever been removed.

Sixth, those cases of so-called locomotor ataxia which had been cured were simply

cases of congestion of the spinal cord, more profound in the posterior columns.

Dr. W. A. HAMMOND thought the view advanced by the author, that the condition was one of congestion, and not of true sclerosis of the posterior columns, was correct. He referred to a case which he had recently seen of marked symptoms of locomotor ataxia. There was presumable syphilis, but iodide of potassium and bichloride of mercury produced no effects. After the use of opium, to obtain sleep, and nitrate of silver for two weeks, nearly or quite all of the symptoms disappeared. Dr. Hammond thought there had been congestion affecting the central part of the cord more than other parts.

Dr. BARTHLOW, of Philadelphia, said he agreed with the author of the paper that cases of locomotor ataxia could be cured; but what kind of cases? He mentioned a case which was cured by the iodide of potassium, but it was a case of mercurial ataxia. He had no doubt that there were many cases of locomotor ataxia cured which were really cases of mercurial poisoning. The symptoms might be perfectly typical of locomotor ataxia. There was no doubt that there were cases of chronic syphilis producing ataxic symptoms which might be cured. We ought to make a distinction between these cases due to deposit of gummata or metallic poisoning, and those due to true sclerosis. In this limited sense he believed locomotor ataxia could be cured. Furthermore, he thought that under the use of proper remedies, taken in time, certain cases of true locomotor ataxia might be arrested *in statu quo*. But there was a great difference between arresting the disease and restoring the cord to its normal condition.

The paper was further discussed by Drs. Corning, G. M. Hammond, Webber, Rockwell, Massey, Mills, Bannister, and Birdsall. Dr. Webber doubted whether there could be hyperæmia or congestion lasting weeks and months, producing ataxic symptoms. The other gentlemen did not believe that true locomotor ataxia could be cured, and thought that the symptoms in cases which recovered were due to some other condition.

Dr. MILLS had seen many cases of locomotor ataxia, and also a number of pseudo-ataxia, and he had never seen a case of the former kind cured, while he had seen several of the latter kind recover. Cases of distinct syphilitic ataxia might be cured, as suggested by Dr. Bartholow, by anti-syphilitic treatment. He believed that there was a form of meningo-myelitis, a low grade of inflammation involving the membrane and the extreme periphery of the cord, which might give rise to symptoms of typical advanced sclerosis of the posterior columns, and these cases sometimes got well. Again, he believed that sometimes cases of neuritis became cases of sclerosis. There were forms of general neuralgia which were sometimes mistaken for locomotor ataxia, and

these cases were cured. It was well known, of course, that there was a form of hysterical locomotor ataxia, and sometimes a combination of having been exposed to syphilis on the part of the patient and a certain condition of lowered nerve-tone which gave rise to a disease which was supposed to be syphilitic, but which was hysterical in character, and this condition was cured in the process of time. True typical hysterical locomotor ataxia was, of course, curable. In these cases there was not likely to be absence of the patellar reflexes. His own impression was that we could not say that we could have limited congestion of certain columnar or other regions of the cord. He thought it more probable that there was real inflammation giving rise to the ataxic symptoms.

Dr. BIRDSALL referred to some cases in which there was an apparent cure of the locomotor ataxia, but some months afterwards symptoms took place which showed that the disease was progressing.

MULTIPLE NEURITIS.

Dr. S. G. WEBBER, of Boston, read this paper, in which he briefly reviewed the literature of the subject, and narrated the histories of four cases in considerable detail, and briefly referred to eighteen cases which had come under observation comparatively recently in the hospitals at Boston. It was only within a few years that a more general inflammation of the nerves had been recognized. Up to this time he had found recorded six cases with autopsies and twelve cases without. Speaking of the eighteen cases which had entered the hospitals at Boston, fourteen only came under his own observation. The youngest patient was 9 years old. One was 4 years old; but there was doubt as to whether the condition were one of multiple neuritis or of infantile paralysis. The oldest patient was 51 years. More than half were between 20 and 30 years of age. There was an interval of one week to four months after the beginning of the symptoms before the patients entered the hospital. The stay varied from two days to six months. Only a few of the patients were able, after three or four months, to go back to their occupation. In most of the cases no cause for the disease could be assigned. In five the patients attributed it to taking cold. Nine were females. There were three adults. Disturbance of sensation was one of the most constant and persistent symptoms. Tingling or a sleepy feeling might precede the more severe pain, but within a comparatively short time it became severe. It might be confined to one nerve-district or exist in several. Sometimes the patient could mark the course of the nerve by the pain. The character of the pain was aching, boring, shooting, burning,—varying in different cases. With the pain there was great hyperæsthesia of the skin and tender-

ness of the muscles, pressure causing excessive pain. Pressure over the nerve-trunks gave more acute pain than when applied to muscles. When the hyperæsthesia subsided sufficiently, there would be found diminution of tactile and other sensations. Special senses had only rarely been affected. Exceptionally the pain and tenderness had been very slight, or wanting. Motion was early disturbed. At first there was stiffness, due, in part, to pain; later, paralysis more or less complete. The muscles were not affected equally, but paralysis was distributed according to the nerves most affected. Within a comparatively short time the limbs became contracted, sometimes the contraction becoming extreme. The heels might be drawn up to the thighs, and the knees nearly against the chest. Electrical reaction of the nerves and muscles showed changes; the various tendon reflexes—both deep and superficial—were generally absent.

The temperature and pulse were elevated in the earlier stages of the disease, and in two fatal cases throughout the observations. Later the temperature usually dropped to nearly or quite normal. The pulse-rate continued rather high. In a few cases mild delirium was noticed, most marked at night. One or two women showed something of an hysterical disposition. In some of the patients there was general wasting of the tissues and loss of flesh. In some there was œdema of the limbs and of the face. Excessive sweating was observed in some. One patient had an abscess in the parotid region during convalescence. In the fatal cases the respiratory muscles became paralyzed, the voice was changed, deglutition was affected; the patient died, perhaps, from entrance of food into the air-passages.

The symptoms having been pointed out, it would not be very difficult to make the diagnosis in marked cases. It might be differentiated from anterior poliomyelitis by the pain, hyperæsthesia, tenderness over nerve-trunks, diminution of sensation, high pulse-rate, more gradual onset from acute form of poliomyelitis. It was less common for the latter to invade all four of the extremities. Progressive muscular atrophy did not give the sensory disturbances or the electrical changes. In lead-paralysis the sensory disturbances were not so marked. It might be mistaken for acute rheumatic fever, for in the case of three or four of the patients who came to the hospital there had been a diagnosis of rheumatism. Spinal meningitis might be recognized by the greater amount of pain in the back, which was increased by passive motion, etc. One case had been reported in which there had been a diagnosis of locomotor ataxia. Dr. Webber referred briefly to the fact that it had been claimed as of bacterial origin in Japan. He gave the results of the autopsy in one or two cases, referred to the fact that different opinions had been enter-

tained with regard to whether the disease were of peripheral or central origin, and stated, with regard to treatment, that salicylic acid seemed to cut short pain in some cases; morphine was necessary to relieve pain in many; the application of a cloth soaked in a solution of carbolic acid was a comfort; blisters over the course of nerves were of benefit in relieving persistent hyperæsthesia. It was well to try to avoid contractions by gentle extension. Massage, extension, and electricity were to be used a long time in overcoming contraction and promoting a return of power.

The paper was discussed by Dr. ROCKWELL, who inquired whether the actual cautery had been employed, and referred to one case in which he had found it, when applied to all the hyperæsthetic spots on the body, of decided benefit. He could not say whether it had any effect upon the general course of the disease.

The paper was further discussed by Dr. BIRDSALL, who regarded it as a valuable contribution to this subject.

Dr. R. W. AMIDON then presented a brain from a case of word-deafness and blindness without paralysis.

There was an extensive lesion involving the cortical substance at the angular gyrus, extending posteriorly and superiorly.

Dr. ROBERTS BARTHOLOW then read a paper on

CHLORIDE OF GOLD AND SODIUM IN SOME NERVOUS AFFECTIONS—A PRELIMINARY NOTE.

In this communication the author first referred to the use of gold as a medicinal agent by the ancients and by some physicians of more recent times. There were three headings under which it was convenient to group the therapeutic powers of gold: its so-called alterative action, its action upon the nervous system, and its action upon the genito-urinary system.

He had always preferred the double chloride of gold and sodium since he had learned how slightly diffusible was the chloride. The double salt was readily diffusible. He had had no experience with the oxide of gold. The usual dose of the golden sodium chloride was one-twentieth of a grain. In this quantity, administered two or three times a day, it appeared to have, as a primary action, the power to promote constructive metamorphosis, to improve the condition of the blood, and to increase tissue-strength. Kept up for a time, the tissue-changes became more rapid, waste occurred in excess of repair. The tissues which yielded most readily were connective tissue and pathological formations. Hence the utility of the remedy in sclerosis, whether nervous, hepatic, or renal. Especially in posterior spinal sclerosis and chronic interstitial nephritis had he found the salt very efficacious.

He was far from believing, however, that lost parts could be restored. When used in locomotor ataxia early and persistently, it had seemed to him to arrest the disease in favorable cases. In three cases it seemed to him that the disease had not only been arrested, but had been improved. Thus far no gastric or intestinal disturbance had followed the use of this remedy. Favorable results had attended its use in certain cases of kidney disease. There was a form of hypochondriasis coincident with changes in the cerebral vessels, and it might be depending upon those changes, in which the gold and sodium chloride was effective. In time the uneasiness in the head, the vertiginous and other abnormal sensations, subsided, and the mental depression cleared up. It seemed to him that the ancient opinion that gold was a cordial in cases of melancholia was supported by modern experience. It was also of use in certain nervous conditions characterized by spasm. One physician told him that he employed no other remedy in cases of pseudo-croup and laryngismus. In various cognate affections it would be found useful. The same power rendered gold of great value in certain urino-genital affections. He had referred to chronic interstitial nephritis. He could mention many cases of albuminuria in which the curative effects of this remedy had been conspicuous.

He presented these notes in advance of a more elaborate treatment of the subject, to awaken more general interest in the use of this agent. Wider and more varied experience was necessary to fix its position.

The paper was discussed by Drs. DANA and BANNISTER.

FRIDAY (THIRD DAY).—AFTERNOON SESSION.

The PRESIDENT in the Chair.

The Society took up the consideration of the resolutions offered by Dr. Wilder the previous day. The first resolution, relating to the appointment of a committee, was adopted, and the other two were referred to that committee. The President appointed as such committee Drs. Wilder, Spitzka, McBride, Gray, and Birdsall.

Dr. ISAAC OTT read a paper on

THE EFFECTS OF INJURIES OF THE SPINAL CORD UPON THE EXCRETION OF CARBONIC ANHYDRIDE.

The effect of injuries of the spinal cord upon the excretion of carbonic acid had been, so far as he knew, little, if at all, noted. The action of complete division of the cord upon the pulmonary exhalation had been observed in the course of calorimetric experiments by others. That the gray matter and white matter of the cord had different functions was axiomatic, and it was an important question what relation they sustained to the excretion of carbonic acid. This subject also had rela-

tions to the pathology of the thermo-inhibitory fibres of the spinal cord. The experiments which he had made were upon rabbits. He described the apparatus in use for this purpose, and said the animals were kept in a chamber of a temperature of 100° F. If the cord of the rabbit be cut about the junction of the dorsal and lumbar regions, the temperature would fall, unless the animal were placed in a temperature which approached that of the bodily temperature, in which case it would rise. This rise of temperature was due to division of the cord, and not to external heat. Thus, if the uninjured animal were placed in the warm chamber for some hours, no rise of bodily temperature took place. But when the cord was divided and the animal replaced in the warm chamber the temperature rose. If the cord were completely exposed, but not cut, the temperature would rise only a few tenths of a degree. If on the following day the same cord were divided, the temperature, whilst at first falling, would rise several degrees. It made no difference, in the majority of the cases, whether the white or the gray matter were divided. No rise of temperature was observed after an hour, except in two cases; in most cases it then fell below normal. Prof. H. C. Wood had made six calorimetric experiments, during which the cord was completely divided. In his six cases carbonic acid was increased, except in two, and in one of these much blood was lost.

The paper was discussed by Drs. BARTHOLOW, W. A. HAMMOND, and the author.

A CONTRIBUTION TO THE STUDY OF HYSTERIA AS BEARING ON THE QUESTION OF OÖPHORECTOMY.

Dr. G. L. WALTON, of Boston, read a paper with this title. The question of operation should be limited to cases in which the symptoms were secondary to pelvic disturbance,—cellulitis, cystic degeneration of the ovaries,—as distinguished from the far more numerous cases in which the local symptoms were secondary to constitutional disorder. We might have to include certain cases in which no organic disease was suspected, but should be extremely conservative in this respect.

We are ignorant of the exact relation of hysteria to ovarian disease. The theory was suggested that the loss of function in the cortical cerebral cells in, *e.g.*, hemi-anæsthesia, was due to spasm of the cortical blood-vessels analogous to that supposed to exist in some forms of migraine. In favor of this theory were mentioned the rapidity of onset and disappearance of symptoms, the regularity of the "transfer," and the fact that other vasomotor irregularities were common in hysterical patients. In support of the theory, was mentioned the case previously published by the reader, in which left-sided spastic migraine coexisted with right-sided hemi-anæsthesia and with left-sided intermittent retinal ischæ-

mia, the blood-vessels of the right eye remaining unaltered. If this theory were correct, the starting-point for the vascular spasm lay probably in irritation of the sympathetic nerves of the ovaries in the cases under consideration. Theoretical considerations were of minor importance as compared with the practical question, was hysteria ever secondary to pelvic disease, and could it ever be relieved by removal of the ovaries? Both parts of the question could be answered probably in the affirmative in view of reported cases. As an illustrative case of the rôle played by hysteria as an additional indication for operation, was reported the case of a patient operated upon by Dr. B. Malden, in which hemi-anæsthesia and convulsive attacks, added to extreme debility and severe pain during and between the catamenial periods, furnished the ground for operating after failure of other treatment. The ovaries were removed without the tubes. Relief of all symptoms followed, including the hemi-anæsthesia and the hysterical convulsions, and the general condition of the patient was much improved. The improvement had been continuous up to the present time, over four months after the operation.

Dr. SPITZKA thought we were far from being able to adopt even the limited and moderate views which Dr. Walton had brought before us. Cases recovered sometimes just as quickly without any operation as in the case reported. Again, we would find even extreme disease of the ovaries without any of the symptoms spoken of pertaining to hysteria. As to the theory regarding the affection of the vaso-motor system, it was simply a theory, with no more weight than others which might be advanced. We knew nothing about it. He referred to a case of hysteria in which the symptoms could be referable to the disease of the ovaries if these organs were ever at fault, but not a particle of relief was afforded by oöphorectomy. The patient died five days after the operation.

Dr. C. K. MILLS said that his own view with regard to the operation was that certainly in the vast majority of cases in which it had been performed the trouble might have been relieved without the performance of the operation. We all knew that hystero-epilepsy could be relieved by a much less severe measure than the one proposed. He had seen cases in which the operation had failed to relieve the cerebral condition. He believed that hysteria was very seldom dependent upon disease of the ovaries or uterus.

Dr. PUTNAM, of Boston, did not see why in some appropriate cases, in which all other means failed to give relief, the ovaries should not be removed as the probable source of irritation. We knew that the removal of other parts, the source of irritation, gave relief.

Dr. A. D. ROCKWELL had often found the hysterical or neuralgic symptoms removed

while the ovarian disease remained. Undoubtedly, great care should be exercised in selecting cases for removal of the ovaries. He mentioned the case of a woman upon whom eminent gynæcologists urged removal of the ovaries. It was refused, and she was to-day free of any hysterical symptoms.

Dr. PUTNAM JACOBI, by invitation, related three cases, and said that, as had already been stated by previous speakers, there was always a question with regard to the theory as to whether the sensory symptoms were projected from the cerebral cortex or whether we had to do with a demonstrable source of local irritation, causing, by reflex action, disturbance of the cerebral cortex. She asked if the history did not, in many cases, point to a condition similar to the aura in epilepsy. If the patient's attention could be called away from her troubles for a time, it was no more than could be done in the pain of cancer or other wound.

The discussion was closed by Dr. WALTON, who thought no one could be with reason more conservative than he had expressed himself in his paper.

TYPICAL HYSTERICAL SYMPTOMS IN MEN DUE TO INJURY, AND THEIR MEDICO-LEGAL SIGNIFICANCE.

Dr. JAMES J. PUTNAM, of Boston, read the paper, and said the important point was that, more commonly than had been thought, there were symptoms of typical hemi-anæsthesia following injuries of the kind referred to such as the patient could not have imitated, even though all the other symptoms of hysteria had been present or disappeared. Three cases of this kind were referred to, all occurring in men, and the fact was commented upon as affording valuable evidence of disease in cases which might have been supposed to be cases of simulation. Similar cases had been reported by German observers.

Dr. DANA could appreciate the difficulty Dr. Putnam had mentioned as to distinguishing between real and simulated symptoms of injury. He mentioned two cases, in one of which he thought the symptoms were largely due to the influence which the hope of obtaining a large reward made upon the patient's mind. This subject was largely in a state of confusion. He thought that cases of railroad-injury might be divided into two grand divisions,—one in which there was serious injury, contusion, fracture, etc., from which the patient suffered immediately after the accident, and finally might get well or die; the other class might be subdivided into two divisions, in one of which the symptoms developed slowly, and finally presented a picture of meningo-myelitis of the cord resulting from concussion, and in the other there was a marked hysterical element. An important point in diagnosis might exist in the electrical resistance of the two limbs.

Dr. PUTNAM closed the discussion. He referred to the necessity for testing all of the senses: sometimes one and sometimes another might be found to be affected. In one of his cases there was atrophy of the limb due to inaction. This would not have taken place had inability of motion been only simulated.

Dr. SARAH J. McNUTT, of New York, presented specimens and read the history of a case illustrating sclerosis of the greater part of the motor cortical zone of both hemispheres, with secondary degeneration of the paraminal tracts. The girl had never been well, had shown symptoms pertaining to the nervous system, and it was believed by the author that the lesions found their origin in injury during instrumental delivery.

EVENING SESSION.

Dr. W. R. BIRDSALL in the chair.

After the report of the Council, Dr. W. R. BIRDSALL read an abstract of a paper on

OPHTHALMOPLEGIA EXTERNA PROGRESSIVA.

The paper began with a report of two cases of slowly progressive paresis of all the external muscles of both eyes, the levatores palpebrarum, the recti and obliqui, producing partial ptosis and nearly complete immobility of the eyeballs, with complete preservation of the functions of the internal ocular muscle, iris, and ciliary muscles. Accommodation was normal, reaction of iris to light and accommodative movements also normal. There was no perceptible lesion of the fundus. Vision normal in one case and defective from irregular astigmatism in the other. There was no evidence of disease in any other cranial nerve or in any part of the body, no headache, and no suspicion of syphilis. Both patients were males, aged respectively seventeen and twenty-nine years. Slower improvement occurred in one case, under large doses of iodide of potassium and faradization of the eyes, than in the other. Both cases were still under treatment.

Dr. BIRDSALL held that the lesion could not be due to intra-orbital disease, nor to an intracranial lesion involving primarily the trunks of the nerves implicated, on account of the escape of those branches of the third nerve which supply the iris and ciliary muscles; that it must, therefore, be an affection of the nuclei of origin of the sixth, fourth, and parts of the third nerves which supply the external ocular muscles, these parts representing an associated system concerned in the movements of the eyeballs and in lifting the upper lid, somewhat distinct from the iris and ciliary muscles, which are more intimately connected with the functions of the optic nerve in the regulation of light, and are probably supplied, as far as the sphincter iridis and the ciliary muscles are concerned, from nuclei in close proximity to, but distinct from, the nucleus of

origin of the remaining third-nerve fibres which supply the external ocular muscles. A gross lesion or a focal softening, as a neoplasm, meningitis, arteritis, could hardly affect nuclei so widely separated as are the third, fourth, and sixth, and not at the same time affect the ciliary and pupillary centres and other neural tracts. Degeneration within this system of associated muscles, nerve-tracts, and centres, similar to the degeneration of progressive muscular atrophy and of labio-glosso-pharyngeal paralysis, appeared to be the most consistent theory of the pathology of the cases.

Dr. BIRDSALL stated that Hutchinson, in 1869, had advanced this view (based on an atrophy in which the lesion was found by Dr. Gowers) to account for this class of cases, which Von Graefe first called attention to. In most of Hutchinson's cases, however, the iris and ciliary muscles were affected, and either the condition or indications of disease in other parts of the nervous system were present in all of his seventeen cases. Reference was made to the allied cases reported by other authors, and to certain relations between tabes dorsalis and progressive muscular atrophy, and also to syphilitic ocular affections.

A STUDY OF THE ETIOLOGY OF TABES DORSALIS, WITH SPECIAL REFERENCE TO THE EFFICIENCY OF SYPHILIS.

Dr. E. C. SEGUIN, not being present, had requested Dr. BIRDSALL to present the statistics, which he had prepared from notes in private practice. There were seventy-two cases. Of these, twenty-two, or 30 per cent., gave a history of chancre. Of chancre and secondary symptoms there were sixteen, or 22.2 per cent. Of those giving no chancre or secondary symptoms there were fourteen, or 19.4 per cent. In twenty, or 28 per cent., there was no mention with regard to syphilis. Thus there was 52.2 per cent. with a history of syphilis, and 48 per cent. in which syphilis was not mentioned.

Dr. BIRDSALL said that at the last meeting of the Association he himself gave statistics of about forty-two cases, of which only 9.5 per cent. gave a syphilitic history.

Dr. AMIDON presented statistics left by Dr. Webber, of Boston, and Drs. Spitzka, Rockwell, Putnam, Webber, and Dana participated in the discussion. Dr. DANA said that he was quite sure that among syphilitic sailors not more than one in a thousand had tabes.

Dr. C. L. DANA, of New York, then read a paper on

MYSOPHOBIA AND FOLIE DU DOUTE.

Two cases, one of either affection, of a marked kind, were related. The question was raised whether mysophobia should be classed with *folie du doute*, and what significance should be given to morbid fears, and where they should be placed. The condition

ERGOT.—Of the physiological properties or therapeutic applications of ergot it has long been unnecessary further to speak. No drug has been more systematically studied by chemist or physiologist, and there is none whose exact place has been more definitely fixed in the medical practitioner's *materia medica*. Until within very recent date the pharmacy of the drug was, however, strangely neglected. Ergot is peculiarly a drug whose medicinal activity is affected by conditions of climate, soil, season of gathering, and the various contingencies liable to interfere with the successful gathering, drying, etc., of the crude material. It is well known that the chemical constituents on which its virtue depends are liable to extreme variations with the conditions indicated. Notwithstanding this fact, however, the pharmacist continued to manufacture the usual Galenical preparations after the usual formulæ. The consequence was that the activity of these preparations was liable to variation from year to year, and few practitioners but have been disappointed in results confidently looked for, through this cause. With a view to remedying this great evil, especially great through the liability of the failure of the preparation at times when the life of a patient depends on its prompt action, we several years ago succeeded, after the necessary scientific experimentation, in giving to the profession a constant preparation, under the name of *Liquor Ergotæ Purificatus*. This preparation was made to conform at all times to a fixed standard, and contained an unvarying percentage of those chemical principles on which physiological study has demonstrated the oxytocic properties of the drug to depend. The drug is also known to contain certain principles of a more or less poisonous nature. These were carefully eliminated from the finished preparation. The success of this venture at a preparation of ergot which should be scientifically correct, encouraged us to make similar preparations of vegetable drugs, to which we, for convenience, gave the generic name of "Normal Liquids," and the name of our *Liquor Ergotæ Purificatus* was made to conform to this nomenclature. We, therefore, now place it on the market as

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ERGOTIN (PURIFIED).—This preparation represents in concentrated form the activity of the drug, freed from inert and other positively irritating constituents. We believe it to be greatly superior to any other preparation in the market for hypodermic use. Its concentrated form adapts it to the pocket-case, where it may be thus constantly at hand in case of emergency.

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This is a well-defined alkaloid that must not be confounded with Ergotine or other extracts. It is given in doses of from $\frac{1}{16}$ to $\frac{1}{8}$ milligramme (1-240th to 1-120th of a grain) in all cases where Ergot is indicated, viz., Flooding, Post-Partum Hemorrhages, Metrorrhagia, etc., etc. It is put up in the following forms:

Syrup, containing $\frac{1}{8}$ milligramme to each teaspoonful; Dose, from 1 to 6 teaspoonfuls per day.

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of *folie du doute* was usually classed among the monomanias. In most cases the disease could not be considered an insanity unless this term were used in a very wide sense. Dr. Dana said he had at first been inclined to think that the two classes of cases, mysophobia and *folie du doute*, could not be related, but he had changed his mind. It now seemed they were both a kind of aborted monomania, so to speak, conditions showing a morbid state of the brain in one direction. As to the interpretation which should be put upon morbid fears, he thought they were all to be regarded as simply psychopathic symptoms, which were sometimes found in insanity, hypochondriasis, etc.

Dr. SPITZKA had seen as many as eighteen cases within fourteen months, and he had been struck by the fact that heredity played a very small rôle in the etiology; masturbation among men was the great cause. The results of treatment, medicinal and moral, had been quite gratifying.

Dr. LEONARD WEBER could not see why mysophobia should be raised to the dignity of a subdivision of *folie du doute*. As to the cause, there was usually a history of exhaustion from masturbation or sexual intercourse in the male, and uterine disease in the female. He regarded mysophobia as simply one of the symptoms of hypochondria in the male and of hysteria in the female.

Dr. DANA said he did not think, if Dr. Weber should see a marked case of mysophobia, that he would confound it with hypochondriasis or hysteria. He did not understand that any author made a separate disease of the affection, but that it was a name for a psychopathic symptom, indicating that the person had a particular form of monomania or insanity. He had derived very little benefit from other than moral treatment.

Dr. MASSEY read a paper on

THE MODIFYING EFFECT OF ANÆSTHESIA ON GALVANIC REACTION OF SPECIAL SENSES.

The case related was one of partial anæsthesia of the fifth nerve. The patient was healthy, aged 48, who became blind in both eyes,—in the one a year sooner than in the other. There was no assignable cause. Over the left eye there was a partial anæsthetic spot. A needle might be thrust through the skin without pain, but it was felt by the patient. To the faradic current sensation was normal, and to the galvanic current the local effect on the skin was normal, but the sensation of tingling was two-thirds lessened. Gustation also two-thirds lessened. Vertigo was readily produced when the poles were placed anywhere but over the anæsthetic area. In this area thirty-five cells were required, while but twelve would suffice at the opposite side of the forehead. No vision could be induced. Treatment was by interrupted current to the eye and numb spot, and increasing doses of

sulphate of strychnine. There was an apparent result of decided increase in sensation at the numb spot. With increasing sensation there was decrease of number of cells required to produce dizziness and taste. This was a corroboration of facts observed by Althaus.

Dr. ROCKWELL said it was an interesting fact that when taste and smell were lost the galvanic current would fail to give the slightest sensation of metallic taste, and it was only as the patient recovered this sensibility that perception of metallic taste returned.

Dr. G. W. JACOBY presented a paper on

CEREBRO-SPINAL SATURNISM.

He related a case of marked saturnine ataxia which recovered under iodide of potassium. He had been able to find reference to only three such cases.

Dr. AMIDON thought there should be no more doubt about the possibility of lead producing ataxia than arsenic and mercury.

Dr. BIRDSALL had observed marked tremor in lead-poisoning, but never absolute paralysis.

Dr. DANA said that cases of lead-poisoning were quite common, and it was quite certain few had observed such effects as those mentioned by Dr. Jacoby.

The Association adjourned, to meet at the call of the Council in 1885.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held June 5, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

THE DEATH OF A SENIOR EX-PRESIDENT OF THE ACADEMY, DR. WILLARD PARKER, AND OF AN HONORARY FELLOW, DR. S. D. GROSS. —ANNOUNCEMENT AND REMARKS BY THE PRESIDENT.

Dr. BARKER said that, in connection with the death of two of our most eminent and distinguished Fellows, he had learned certain facts with regard to the history of the Academy which struck him as interesting and curious. The Academy was founded thirty years ago, there being one hundred and eighteen original Fellows. One hundred of this number are now dead. Seven died between the ages of eighty and ninety, the average being eighty-three; eighteen died between the ages of seventy and eighty, the average being above seventy; forty-seven died between the ages of fifty-five and seventy, the average mean being sixty-four and a half. Of eight ex-Presidents who were original Fellows, the average age at the time of their death was seventy-eight and a half. Only two of this class died under seventy. Our present senior ex-President, Dr. James Anderson, has already passed his eighty-sixth birthday, and is still erect and mentally active, and

nearly all the others now living were, he believed, in vigorous health. He expressed the prayer of all that they might continue long with us. He thought it had been demonstrated that, notwithstanding the hard, laborious life of the medical man, his irregular hours for food and sleep, and his burden of anxiety and responsibility for the happiness and lives of others, his longevity compared most favorably with that of men in other professions. Might we not ask if the influence of the Academy had not been a factor in bringing about this result by stimulating men to an active, useful, and honorable life, suppressing envy and hatred, and encouraging cheerfulness and good will? The President here expressed sympathy for Dr. Samuel T. Hubbard in the death of a promising son from disease contracted while in the performance of his duties in the Bellevue Hospital.

Within a few weeks the profession had lost two of its best and most distinguished men in this country, both of whom belonged to the Academy. He would not now repeat any of those biographical details which had been so generally published, but would only refer to their connection with us, and to the personal qualities which seemed to explain their great success and eminence in their professional lives.

Dr. WILLARD PARKER was elected President of the Academy in 1856. At the time of his death he was within a few months of the eighty-fourth year of his age. For many years he was the most prominent and conspicuous medical man in this city, not only as a surgeon, but also as a general practitioner. With the exception of Benjamin Rush, he did not believe that any physician in this country ever commanded so powerful an influence over the community where he resided, both professional and public, as Dr. Parker did for many years in this city. His commanding and attractive person, his genial and frank manner, his uniform cheerfulness, his practical common sense, his ease and fluency in conversation,—all combined to produce a magnetic influence on those about him. The most prominent characteristics of his professional mind were quick perception, a kind of insight which gave him an intuitive power as to the essential and practical features of disease, enabling him to distinguish the incidental or what was merely coincident and secondary. In the treatment of his cases, while he did not know that he ranked as a great therapist, he still must regard him as exceptionally successful. He always made his patients feel that they were better. He never knew a physician who more thoroughly understood the influence of the *moral* on the *physique*, or who more constantly utilized this knowledge in his practice. All his patients had the benefit of the stimulating and tonic effect of his cheerfulness and good will. His general and

hygienic directions to his patients must have been of unusual excellence. Some years ago, he gave a course of public lectures, both in New York and Brooklyn, which he called "The House we Live In," which Dr. Barker regarded as the most sensible and useful course of popular lectures on health which had appeared since the most famous work of Andrew Combe. As to his rank hereafter as a great surgeon, Dr. Barker did not consider himself able to judge; his life had been too busy to allow of his contributing so much as some others to medical writings, but many valuable articles from his pen appeared in current medical literature. Dr. Parker had kept up to the last the warmest interest in the Academy of Medicine.

PROF. SAMUEL D. GROSS, who died within the past month, in the seventy-ninth year of his age, was elected a corresponding Fellow of the Academy in 1851, and an honorary Fellow in 1876. No man of the present age (and he asserted this without any qualification) had made such a reputation as a great surgical teacher and writer as Dr. Gross; and no one of the profession of this country had ever received such honors from universities and learned societies in Europe; and in this country the profession had bestowed upon him the highest honor in their gift. With regard to him the voice of envy was never heard, and no one had ever whispered that all these honors were not earned honestly or were not well merited. Underlying all this, he had for some years noticed the rare and curious fact that even those who had had no personal acquaintance with Dr. Gross seemed always to speak of him with personal regard and affection. This, probably, was due in large measure to the honesty, integrity, and sincerity of purpose which stamped the man and was conspicuous and transparent in all of his writings. His industry and ability were marvellous, and the amount of work which he accomplished was monumental. He did not believe that in medical history there could be found any instance of a man seventy-nine years of age writing such a paper as the one read at the last meeting of the American Medical Association on "Laceration of the Sexual Organs consequent on Parturition." The most distinguished gynecologist of the present day might well feel proud to have written it.

To each of the two men—Willard Parker and S. D. Gross—might be applied, with much greater truth than usual, the very trite quotation, "He was a man, take him for all in all, I shall not look upon his like again." Their name and their fame were a part of our common inheritance. There is no greater inducement to stimulate those who are going out than the character and success of the great ones who preceded; and therefore it is our privilege, as well as our duty, to cherish sacredly their memory.

"Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time."

A PLEA FOR MORE HEROIC INTERFERENCE IN SURGICAL AFFECTIONS OF THE BRAIN.

Dr. R. W. AMIDON read a paper with this title, in which he supported his plea by a review of statistics given by Walsham and others, and a collection of cases which he had made in which trephining or similar operations had been performed since 1879. Walsham gave over six hundred cases in which the trephine had been used, and of this number over four hundred patients died. Walsham's analysis of the cases, however, showed that only ten and six-tenths per cent. of the deaths could be assigned to the operation itself, and Dr. Amidon thought that this was even too great an estimate of this cause of mortality in the list. The cases which he had collected, occurring since 1879, amounted to one hundred, and were not selected. He thought that from these data we could arrive at pretty conclusive evidence as to the mortality of the operation *per se*, as looked at in the light of modern surgery. Of the hundred cases, twenty-six died, and, of the twenty-six, twenty-three presented at the time of the operation symptoms endangering life, thus leaving only three cases in which the fatal issue could even be remotely traced to the operation. This certainly should rob the operation of its terrors. He related three cases which went to show how extensive injury of the cranial bones might take place and the patient still recover.

It would seem, from statistics quoted, that opening of the dura mater had led to a fatal issue in plus thirty-nine per cent. of the cases; but, if it were remembered that in these cases there was usually laceration of the brain, hemorrhage, or the introduction of a foreign body for exploratory purposes, it would readily be seen that the cause of death could not be traced to opening the dura mater during the operation in all of these cases. On the contrary, it had been shown that this procedure had not been the direct cause of death in more than seven and six-tenths per cent.

The author then considered how much foundation there was for the sacredness in which the cerebrum was usually held, and related several modern cases in which extensive injury of the brain had taken place and yet recovery followed. He briefly referred to the case of Dr. Fluhrer, not yet published, in which a young man shot himself in the forehead, the ball passing back to near the lambdoidal suture. The wound was probed; a counter-opening was made on the posterior portion of the skull, at the supposed exit of the ball through the brain; the ball was found, removed, a drainage-tube introduced, passing from the anterior to the posterior opening in the skull, and the patient recovered, with

a return of all his mental powers. "We must conclude," said the writer, "that the brain shows a remarkable tolerance of injury and remarkable reparative power."

Dr. AMIDON then gave a brief review of the subject of cranial and cerebral topography, by which alone cerebral surgery could accomplish brilliant results. He said that neurologists were perfectly sure that there were certain regions of the brain which, when irritated, compressed, or destroyed, gave rise to perfectly unmistakable symptoms.

He recapitulated by saying that we have in trephining an operation which proves fatal in only three per cent. of published cases; the operation of opening the dura mater fatal in only seven and six-tenths per cent. We have in the brain an organ tolerant of injury, ready to take on reparative process; and we possess knowledge enabling us to tell when certain points of the brain are diseased, and also anatomical data enabling us to pierce the cranium and reach such diseased parts.

As to the operation itself, the substitution of the dental engine, with burr or drill, for the ordinary trephine struck him as advantageous. The dental engine enabled us to remove only as much of the cranial bones as was desired, and of any form desired, and it was specially useful in removing the edge of overriding bone and allowing of the elevation of depressed fragments. The operation should always be done with precautions. We should try to secure only proximate coaptation of the flaps. Provide for the freest possible drainage. Use cold antiseptic dressings without much compression. He said without much compression, because in one of the cases reported compression produced serious symptoms, which, however, were only temporary. We should enjoin quiet in a posture to facilitate drainage. There should be simple diet and a slightly loose condition of the bowels. Should there be a rise of arterial tension and temperature, give jaborandi or aconite to the production of their physiological effect. Quinine and alcohol, if used, should be given only in tonic doses. An anodyne was often indicated, and it was his advice never to use opium or any of its preparations. To ease pain and quiet delirium, or to induce sleep, use hydrate of chloral in small and frequently-repeated doses,—ten to fifteen grains every fifteen to twenty minutes until its effect is produced. Quinine and alcohol in large doses and opium in any doses aggravate intracranial inflammation when present, and he thought they might excite it. These suggestions applied equally well or with still greater force in cases in which the dura matter or brain was accidentally or intentionally invaded.

He would advise the operation of trephining in every case of injury of the external vault, provided there were marked cerebral

symptoms; in every case of compound fracture of the skull, whether there were visible depression or not, or cerebral symptoms or not; in cases in which, after the lapse of months or even of years, unmistakable cerebral symptoms follow injury of the head. In addition to the bone, the dura mater should be opened in all cases in which exploration with the hypodermic needle discloses products of purulent inflammation or a great deal of liquid blood underneath the dura; in all cases in which serious superficial lesion of the brain is suspected, but cannot be otherwise proved. In addition to the bone and dura mater, the brain should be explored delicately with a probe in all penetrating wounds of its substance,—punctured, lacerated, or gunshot. Its mass should be invaded, even when superficially intact, by a fine, blunt exploring-needle when the presence of a foreign body or of a hidden collection of pus is suspected, and extraction or evacuation should be made with delicate instruments. Theoretically, he thought that, in a case of neoplasm of the brain which had resisted medical treatment and continued to grow, threatening life, it should be excised, for the reason that such growths were usually single, were surrounded by an inflammatory zone of demarcation, and always killed by pressure.

Dr. GARRISH opened the discussion, and was glad to hear this plea for the trephine. His first case occurred many years ago, in a man who had had epileptic fits during five years, dating from the receipt of an injury on the head. All kinds of medicinal treatment had failed at the hands of various physicians. Recognizing a depression at the seat of the old injury, he trephined, raised a depressed portion of bone, and the patient never afterwards had a fit. He had since performed the operation in as many as four cases, with like result in every instance. In one case, that of a wounded soldier at the battle of Antietam, lying unconscious for three days, the trephine brought him to life, and he entirely recovered.

Dr. ROBERTS described an electrical trephine, to take the place of the dental engine and drill.

Dr. NOYES described one case in addition to that quoted by the author, that of a boy who suffered from a sinus of the frontal bone and other sinuses near the orbit, which discharged more or less matter. This was about 1867. The boy was stupid, and had had convulsions. Dr. Noyes evacuated about three drachms of pus, and the patient entirely recovered after the operation. He still thought it a question whether it were not justifiable to give quinine and alcohol in these cases, when the temperature and pulse indicated probable heart-failure. This he said, notwithstanding Dr. Amidon's opinion that it was probable quinine had caused a basilar meningitis in

the case in which Dr. Noyes had removed the breech-pin of a gun from the brain of a lad.

Dr. PUTZEL had seen cases at post-mortem at Bellevue Hospital in which the condition of the brain pointed to a possible chance of relief had the trephine been employed. The patients had died without a resort to this measure even after all other means had been given up as hopeless. He thought the statistics upon which the author had founded his plea were not altogether reliable, for the reason that the bad cases would probably not be found on record, while favorable ones usually were published. He thought Dr. Noyes had touched the key-note of the whole question when he spoke of cerebral topography. He must differ from the author as to our knowing very much positively with regard to cerebral localization. There was no doubt that we had located the psycho-motor centres, and we knew from cerebral topography where they were situated, but we might not be able to tell from the symptoms what parts were affected. We might have symptoms indicating a surface lesion, while an operation or an autopsy might reveal the fact that those symptoms had been produced by an internal abscess cutting across some of the motor fibres before they reached the cortical substance. He thought that if the patient were in danger of dying of heart-failure we were justified in administering alcohol and quinine. He thought it would not be safe to give hydrate of chloral in the manner indicated by Dr. Amidon, as we might get its accumulated effects.

Dr. AMIDON closed the discussion. With regard to the danger of quinine, he had given it in a case of galloping consumption in large doses, and it had apparently produced a basilar meningitis.

Dr. CASTLE presented resolutions regarding the extension of the park-area of the city, especially in the annexed district, which were adopted.

The Society then adjourned, to meet the first Thursday in October.

MEDICAL SOCIETY OF NEW JERSEY.

THE One Hundred and Eighteenth Annual Meeting of the New Jersey Medical Society was held at Cape May, at the Stockton Hotel. Dr. Stephen Wickes, of Orange, President of the Society, occupied the chair. The meeting was largely attended, and a large number of visitors were present from Philadelphia, who were elected honorary members. The session was opened by prayer by Rev. G. F. Bishop, followed by brief addresses of welcome delivered by Dr. James Mecray and by Hon. F. G. Melvin, mayor of Cape May.

Among the subjects broached by Dr. Mecray was the improved sewerage system which

had been introduced, which had materially improved the hygiene of Cape May, as shown by the health-returns, this county now having the smallest death-rate of any county in the State. He said that not less than ten thousand dollars had been spent upon the hotel in which this meeting was held; and many other hotels had spent large sums in improving the drainage and water-supply. He also spoke of the great fire which had occurred since the last meeting at this place, and which had required the rebuilding of a large portion of the city, which now has a model fire-department.

The Secretary read the minutes of the previous annual meeting, which were adopted.

Dr. Godfrey, of Camden, read a list of visiting physicians, who were, on motion, made corresponding members.

Dr. H. Genet Taylor, chairman of the Committee of Arrangements, presented the programme of the exercises for the approval of the Society, which was adopted.

Reports from delegates to other State Societies being called for, Dr. Ingersoll, delegate to the Maryland Society, Dr. English, to the Connecticut Society, Dr. Benjamin, to the Pennsylvania Society, and Dr. Hunt, to the Massachusetts Society, presented reports.

The Treasurer's report was received, audited, and approved, showing a balance on hand of \$1644.32, of which \$1550 is invested in United States bonds.

The Committee on Judicial Business made the following report on medical education:

"Resolved, That this Society approves and adopts the recommendations of the special committee on the curriculum of the preparation to be required of persons contemplating the study of medicine in this State, as contained in the report presented at the last meeting of this Society. That, to carry out the recommendations of said report in regard to a censorship as therein contemplated, this Society is of the opinion that two boards of censors should be appointed, consisting each of five members of this Society, one for the northern and one for the southern part of the State, to whom should be presented for approval the credentials of all persons proposing the study of medicine, and, in case of the insufficiency of such credentials, to examine the applicant in the branches of science and learning indicated in the report of the committee. That the Standing Committee prepare and report to the Society for its adoption such amendments to its by-laws as are necessary to carry out the plan and recommendations of the committee. That the Corresponding Secretary communicate the action of the Society on this subject to the district medical societies in this State, with instructions to adopt such regulations as shall effectually secure the observance of the measures adopted by this Society in their several localities. That the Corresponding Secretary

communicate the action of this Society on the subject to the State medical societies of the several commonwealths of the Union, and respectfully request their co-operation with us in the effort to elevate the standard of medical education throughout the country."

A motion to adopt these resolutions led to considerable debate. On motion, further consideration was postponed until the morning session. The Secretary read the report of Committee on Nominations.

In the evening, after the report of the Corresponding Secretary had been concluded, a committee on preliminary medical education reported that the action of the Society at its last meeting had been communicated to the American Medical Association, as directed.

The President, Dr. Stephen Wickes, then read his address on "Living and Dying: their Physics and Psychics," which was a meditation on death, its signs and evidences.

In conclusion he said,—

"Divinity, law, and medicine are distinguished from all others as the learned professions. Those who enter them are not attracted by the promise they give for the accumulation of wealth, nor do they foster an ambition to reach high civil distinction. A few in the ranks of each may secure both; but such prizes are not in the line of an earnest devotion to the higher purposes of any one of them. They are each a resultant of the higher needs of the race. If man had not fallen from the estate in which he was created, none would have been called to proclaim redemption; none to study and digest and regulate the laws of right and justice in the world, were the thoughts and purposes and actions of mankind always conformed to a spontaneous and invariable acceptance of them; and so the perfection and harmonious workings of our physical and psychical nature would have forever saved the human race from the pains and sufferings of disease and mortality of the body. The discussion of our subject cannot fail to impress us with the important and grave responsibilities assumed by the physician when he gives himself to his chosen life-work. Lord Bacon says, 'Every man is a debtor to his profession:' in the learned professions this is emphatically true, for their conscientious pursuit involves the fact that a debt is due to our fellow-man. Need I say that a pure personal character, a profound estimate of the claims of humanity, and a lively sympathy with the sufferings of the sick, and the most assiduous efforts to avert the dreaded event of death,—more dreadful oftentimes to the living than to the departing,—should distinguish a practitioner of the healing art? Our calling is not a mercenary one. The man who enters it with no higher conception of it than a business fails to appreciate its claims upon him. Says a recent writer, 'The physician who makes gold the chief end of his profes-

sion disgraces it.' We may add here that the community soon finds him out and estimates him accordingly. It is a calling which invites to mental application and to scholarly attainment. Nature reveals her secrets only to those who by study search for them in the wider fields of literature and sciences cognate to medicine. The subjection of her treasures to his own use will alone secure the broadened intellect and the higher impulses of the learned physician. When, besides all this, he cherishes a devout and abiding purpose to meet the claims of the God of nature upon his reverent personal service, he meets the claims of his profession, does good in his day, and ends life loved and respected. When such a life is finished, its memory is blessed.

"We have seen a noble, far-spreading tree against the cold, auroral-tinted sky of a winter's sunset, its beauteous summer foliage withered and gone, its fruits all garnered, its graceful and harmonious outlines telling of its spring bloom, its summer beauty, and its autumnal fruitage; it foretells as well its richer products in the future. So is a finished life: its fruitage is over, but its fragrant memories recall its outlines, full of grace and beauty, as they foretell the rewards in store for one who has served well his God and his fellow-man."

The final day's session was opened with the discussion of the resolutions of the Committee on Judicial Business with regard to the requirements for practising medicine. On motion of Dr. Hunt, the resolutions were considered *seriatim*. The first resolution was adopted; the second was amended by the insertion of a clause requiring the establishment of a Standing Committee, to be appointed each year, and the resolution was then adopted; the next two were also adopted; but the fifth was amended by substituting "State" for "Commonwealth." The resolutions were then adopted as a whole.

Dr. I. J. SMITH, of the Standing Committee, read the report on "Public Health," and Dr. GARRISON read the report on "Medical Jurisprudence." In accordance with the spirit of the last communication, Dr. Hunt offered the following, which was approved:

"Resolved, That the Society recognizes the importance of some legislation as to the best methods of securing expert witnesses."

It was further ordered that the subject be referred back to the original committee, and that they, in co-operation with the Standing Committee of the Society, make such changes as they deem best, present the bill to the Legislature, and urge its acceptance.

Dr. WATSON presented a report on the "Army Medical Museum and Library of the Surgeon-General's Office," in which the urgent need for more suitable accommodations in a fire-proof building was insisted upon.

Dr. PARRISH read an able and interesting report on "Lunacy," in which the condition

of the insane in the various State institutions was considered. He stated that the facilities for the study of nervous diseases in the majority of these State institutions were poor and inadequate.

Dr. C. J. KIPP read an essay on the "Prevention and Treatment of Purulent Conjunctivitis." He considers the origin of the disease in children to be by inoculation, and he insists upon the contagious character of the discharges. His treatment is as follows:

Scrupulous cleanliness; the application of cold to the lids in the early stage, and the application of the nitrate of silver to the conjunctiva when the discharge becomes creamy. During the first few days of the disease, while the lids are hot and shining, the conjunctiva is tense and smooth, and the secretion consists of straw-colored serum, he has found it best to do little more than to apply cold compresses to the lids, and to clear the eyes at short intervals. He prefers absorbent cotton to sponge for wiping away the discharges and for the purpose of removing the secretion from the conjunctival sac. He drops water from an eye-dropper between the slightly-opened lids. The eyes should be opened and cleaned at least every hour. Compresses are applied continuously in the intervals. A reliable attendant is of great service.*

When there is a very profuse discharge from the eyes, and the conjunctivæ are a good deal swollen, he uses at first a one-per-cent. solution of nitrate of silver, if necessary a two-per-cent. solution, the indication being a copious purulent discharge and swelling and succulence of the conjunctiva. To apply this caustic solution it was recommended to place the child upon the lap of the nurse, so that the child's head can be held face upward between the knees of the physician. Corneal complications require special care in their treatment, a mydriatic is often needed, and in addition leeches to the temples, and application of a cold dressing with a light bandage.

Dr. T. G. WELCH next read an essay on "Many Drugs: Few Remedies,"* which was a vigorous protest against dogmatism and specific medication, and especially condemned the application to the human subject of the results of experiments upon the lower animals with various toxic agents. He believed that the profession is in danger of falling into a form of charlatanism in following the recommendations of new remedies by interested dealers, and said that if a few drugs, like opium, quinine, iodine, phosphorus, the iron salts, strychnia, aconite, and anæsthetics, were rescued, and the bulk of the rest sunk in the sea, the death-rate would not necessarily be increased thereby. In conclusion, he complained of a want of a uniform system of recording the results of experience, and recommended, as a means of supplying this,

* Appeared in full in the Medical Record, p. 66r.

a College of Experimental Medicine, as recommended by Milton, with a comparative system of registration for correcting errors of observation.

The following officers were then elected: *President*, P. C. Barker, M.D., Morristown; *First Vice-President*, Joseph Parrish, M.D., Burlington; *Second Vice-President*, C. J. Kipp, M.D., Newark; *Third Vice-President*, J. W. Ward, M.D., Trenton; *Corresponding Secretary*, William Elmer, Jr., M.D., Trenton; *Recording Secretary*, William Pierson, Jr., Orange; *Treasurer*, W. W. L. Phillips, Trenton; *Essayist*, Dr. H. H. James.

Adjourned to meet at Long Branch on the second Tuesday in June, 1885.

PHILADELPHIA CLINICAL SOCIETY.

A STATED meeting of the Society was held May 23, 1884, the President, Dr. HENRY BEATES, JR., in the chair.

Dr. MARY WILLETS reported a "Puerperal Case with Numerous Complications." Mrs. H., æt. 30, primipara, after a normal delivery did well for twelve days, then, after pain in her back and limbs, and chilly sensations, had a rise of temperature, and was attacked with nausea and vomiting. The temperature continued high for two weeks. There was nothing to account for the supra-normal temperature, except a laceration of the cervix uteri, and some tenderness around this point.

On the twenty-fifth day after delivery the patient complained of pain in her left leg. For more than a week there was pain and swelling both above and below the knee. The pain greatly increased on pressure and attempt at extension of the limb, and was in the course of the femoral vein; but careful examination failed to discover anything abnormal. On the forty-third day, the patient having recovered sufficiently to go downstairs, we were suddenly confronted with well-developed mania, at first violent, but subsequently becoming merely loquacious. This, continuing two days, gave place to somnolence, and, five days later, to convalescence.

Dr. E. E. MONTGOMERY remarked that the case was unusual from the lateness at which the fever appeared. During his present term at the Philadelphia Hospital measures had been instituted to prevent the contact of septic matter with the parturient parts. A solution of corrosive sublimate, one to two thousand parts, was used to sponge the parts after placental delivery, and cloths saturated with the solution were kept in place by absorbent cotton, oil-silk, and a T bandage. There had been but three cases of septicæmia during the present quarter.

Dr. A. H. SMITH said the local examination, which the reader of the paper had very properly made, solved the whole problem. Together with the symptoms it showed the

case to be one of pyæmic—not septicæmic—poisoning, in a woman feeble and unable to resist the absorption of pus. Septicæmia cannot arise after all open surfaces have become purulent. The examination was valuable, and he thought it would be better if more care was generally exercised in this direction.

Dr. PHILIP M. SCHIEDT read a paper on the "Clinical Phenomena following the Puerperal State in Two Cases." In the first case, he was suddenly summoned to the bedside of a woman aged about 35, whom he found comatose, with undilated pupils, head drawn to left side and flexed on the chest, a clammy sweat on forehead, and imperceptible pulse. The heart-sounds were faintly detected, and the body and extremities warm. Restoratives and artificial respiration were without avail, and the patient soon expired.

The history of the case, subsequently ascertained from the family physician, was as follows. She had been delivered of a child, after a natural labor, two weeks previously, which was followed by a normal convalescence, unaccompanied by fever or offensiveness of the lochial discharge. Her babe was healthy, was regularly nursed by her, and she was doing so well that her physician had ceased his visits. On the morning of her death she felt unusually well, but about nine o'clock complained of some headache, vomited a little mucus, had a heavy chill, became unconscious, and was found by him in the condition described, which soon terminated in death.

The notes were presented to the Society for the purpose of obtaining the opinions of its members as to the cause of death,—the writer expressing a belief in its cardiac origin.

The other case was one of temporary blindness following labor. After a perfectly natural labor, three hours in duration, the mother failed to see her child when presented by the nurse. It was found that she was perfectly blind, and unresponsive to the candle-test. She remained fully conscious and in possession of other senses. This continued three days, and was followed by gradual and complete recovery. During this time there was nothing otherwise abnormal in her condition. There was no œdema, therefore no examination of the urine was made. Previous to confinement she had been well able to attend to her duties.

Dr. L. BREWER HALL, in discussing the second case, said the most plausible explanation of such rapidly disappearing blindness was œdema, giving rise to choked disk. The cases reported have not been properly examined by an ophthalmologist,—an omission frequently inexcusable. Some cases do not get well, and then we find an atrophy of the optic nerve. He had seen quite a large number of hysterical cases, at times monocular, and such cases are easily diagnosed by feints and attempts to discover that they do

see while off their guard. Some one should always be called in in these cases to make an ophthalmoscopic examination.

Dr. ALBERT H. SMITH acknowledged the want of exact information, while the uræmic action of such cases had been assumed.

Dr. G. BETTON MASSEY denied the necessity of assuming that cases of hysterical blindness were mere malingerers. Such patients at times may be perfectly honest in their inability to see,—the real condition being one of divorce between the volitional and intellectual powers of the mind.

Dr. E. E. MONTGOMERY read a paper on "Tracheotomy in Croup and Diphtheria," based on an experience of twelve cases, one of which, a case of diphtheria, had recovered and was exhibited to the Society. Five of the operations were for diphtheria, the remainder for croup. In all, the operation was one of last resort, and the series teach the importance of early operation. Death occurred most frequently between the third and fourth days; one died in fifteen hours, a second in thirty-six hours, and another on the ninth day. In the successful case, the canula, owing to laryngeal spasm, remained until the twenty-fourth day.

In operating, he gives chloroform, and avoids hemorrhage by transfixing a fold of skin, held by himself and assistant, making an incision 1" long, completing the dissection to the trachea by the forceps and grooved director. After opening the trachea, care is observed to remove all membrane previous to insertion of canula. After-treatment consists in attention to tube, keeping several thicknesses of tarlatan wet with hot carbolized water over it. The temperature of the room is maintained at between 75° and 80° F., and stimulants and good food given, together with quinia, tincture ferric chloride, and corrosive sublimate, —the latter in frequently-repeated doses. The attempt is made to dispense with the tube from the fifth to the eighth day, but it should not be removed until respiration *per vias naturales* is fully established. From these cases he draws the following conclusions: 1, that tracheotomy is justifiable in diphtheria as well as croup; 2, that it should be performed in croup when it is evident that drugs do not control the progress of the disease, particularly when there is depression of the lower end of the sternum during inspiration; in diphtheria, with the advent of suffocative symptoms; 3, that in the performance of the operation, the knife should only be used to incise the skin and trachea, the intervening tissue being torn by director and forceps; 4, that the subsequent use of proper drugs will promote a favorable result.

Dr. COLLINS recalled several flattering cases which in a few days showed crape on the door. He doubted the propriety of anæsthesia, but thought the operation justifiable if only as a means of easing death.

Dr. WILLIAM H. PARISH said this operation, which was one of the easiest in performance, should be resorted to whenever the symptoms were of such a character as to show impending suffocation. To determine this required no little judgment, and he recalled a case of recovery without operation, where both himself and Dr. Allis had agreed it should be performed. He treats diphtheria by large doses of chlorate of potassium and iron.

Dr. W. H. WARDER, in discussing the treatment of diphtheria, thought the chlorate of potassium and tincture of the ferric chloride most successful in ordinary cases. In more malignant ones he had resorted to calomel in five-grain doses. In a case which Dr. Pepper had seen with him, the latter advised a continuance of this plan for forty-eight hours. At the end of this time forty grains had been taken; a large and offensive evacuation followed, and the child recovered. He did not think such large doses usually necessary, however. Much of the calomel passed without other change than oxidation.

G. BETTON MASSEY, M.D.,
Recording Secretary.

REVIEWS AND BOOK NOTICES.

A TEXT-BOOK OF THE PRINCIPLES OF PHYSICS. By ALFRED DANIELL, M.A., Lecturer on Physics in the School of Medicine, Edinburgh. London, Macmillan & Co., 1884. 8vo, pp. 653. Cloth, \$5.

This work is designed primarily as a contribution to medical education, for, as the author very truly states, an arrangement under which a student of medicine may even proceed to the degree of M.D. without any adequate knowledge of physics is self-evidently opposed to common sense and the exigencies of physiological study and of medical practice. We endorse his statement that a knowledge of natural philosophy is an essential part of the mental equipment of the medical student and of the properly-trained medical man.

The fact that the present work has been prepared by an author acquainted with the needs of the intelligent student of physiology, and qualified by his attainments and position to address the medical reader, gives this textbook special value to the profession. The progress of the work is from the simple to the complex. No preliminary knowledge of physical principles is assumed, and every effort has been made to attain to absolute lucidity of expression. But it must not be inferred that it is simply an elementary work in the ordinary sense. It discusses in a masterly manner the principles of physics; its style is succinct but clear, its statements carefully and correctly made, its definitions concise. The term "conservation of force" is discarded, and pronounced incorrect: conservation of

energy is now considered to be more in accordance with scientific fact. Electricity and magnetism are declared to be not forms of energy, neither are they forms of matter, but they are provisionally defined as "conditions of matter." It seems to us that this is an ultra-refinement, unless motion, heat, and light are also regarded as conditions of matter; but, in truth, it is elsewhere stated in the work that "Energy may appear as motion, as heat, as light, as sound, and again as that of electrical or magnetic condition." The propriety of using the term electricity may be questioned, but, if employed at all, it evidently bears the same relation to the source of kinetic manifestations as the other forms mentioned.

We like this book very much, and unhesitatingly recommend it to those who wish a good work of reference upon the subject in which all are interested.

THE CINCHONA BARKS PHARMACOGNOSTICALLY CONSIDERED. By FRIEDRICH A. FLÜCKIGER, Ph.D., Professor in the University of Strasburg, Germany, etc. Translated from the Original Text, with some Additional Notes, by FREDERICK B. POWER, Ph.D., Professor of Pharmacy and Materia Medica in the University of Wisconsin. With Eight Lithographic Plates and One Wood-cut. Philadelphia, P. Blakiston, Son & Co., 1884. Pp. 101, large 8vo, cloth. On sale by J. B. Lippincott & Co.

This valuable monograph of Flückiger's, which constitutes a section of his "Pharmakognosie," has been carefully translated by Professor Power, and is here published in handsome style, illustrated with eight full-page plates. The recent introduction of cuprea bark into commerce, which, although not a cinchona at all, yet contains sufficient proportion of quinine to give it permanent value, and the well-known fact that many varieties of cinchona do not contain the proper alkaloids at all, taken in connection with the interest shown in the cultivation of quinine-bearing trees, have rendered necessary a better comprehension of the subject of cinchonology, as it has been called.

The present work will therefore be welcomed by American readers, as it embodies much interesting, valuable, and authentic information in its short but systematic consideration of the subject.

GLEANINGS FROM EXCHANGES.

POST-MORTEM REMOVAL OF THE BRAIN FOR EXAMINATION.—Professor Wilder, in his course of lectures on the Cartwright foundation, gives the following as the best method of getting at the brain for purposes of study. He says,—

"The principal features of the methods employed in the anatomical laboratory of Cornell University for the macroscopic study of the normal brain are as follows:

"1. The initial determination, if possible, of the use to be made of a given brain.

"2. The concentration and preservative effort upon the parts especially desired, and, in some cases, a reduction of the mass to the region containing these parts.

"3. The exclusive employment of alcohol as a preservative agent.

"4. The maintenance of a low temperature during all preservative processes.

"5. The injection of alcohol steadily for from one to ten days (continuous alinjection*) into the arteries, so as to harden the brain *in situ*.

"6. The demonstration of the forms of the cœliæ ('ventricles') and the contour of their parietes by the injection into them of alcohol or of some mass capable of solidifying into a cast.

"7. The systematic and intentional mutilation or even destruction of the skull for the sake of the brain.

"8. The removal of the adult calvaria after the usual circular incision, by hemisection a little laterad of the mesen.

"9. The exposure of the brains of fœtuses and small animals by means of nippers, the trephine, and the dental engine.

"10. The avoidance of all pulling upon the brain, either active or from its own weight, by the observance of care in all manipulation and by the constant support of the organ *in brine*.

"11. In general, a treatment of the brain in a manner commensurate with its complex structure, its high office, the value of the information to be gained from it, and last, though not least, our own self-respect and consideration for our patients,—for he who is habitually rough with the dead is certainly in danger of occasional disregard of the living." —*New York Medical Journal*.

BORO-GLYCERIDE IN THE TREATMENT OF CONJUNCTIVITIS TRACHOMATOSA.—Dr. Charles S. Turnbull, of Philadelphia, has reported in the *Archives of Ophthalmology* his experience with boro-glyceride in the treatment of forty cases of contagious ophthalmia (conjunctivitis trachomatosa of Arit) in an orphan asylum. In the early stage he used a teaspoonful of the fifty-per-cent. solution in half a pint of water very freely for a few days, in connection with an ointment (sol. boro-glycerid. 50 per cent., ʒii; gelat. petrolei, ʒii; olei rosæ, q. s.), of which a small portion was applied at night. When the discharge diminished, the trachomatous lids and the eyes were kept

* Since *aldehyde* is generally accepted as a legitimate abbreviation of *alcohol dehydrogenatus*, there seems to be no *a priori* objection to *alinjection*, *alinject*, *alinjected*, etc., as a single word equivalent to *alcohol injection*, etc.

clean as before, and a few drops of the fifty-per-cent. solution dropped into the eye or painted upon the everted lids twice daily. The results were exceedingly successful: the majority of the cases improved in two or three weeks, the average length of treatment being two months. Slight pannus and superficial corneal ulceration occurred in only one case; in a few, dacrocystic blennorrhœa existed as a complication. The ointment was considered an essential part of the treatment, and should be continued for at least two months after all discharge has ceased. As many of the cases were scrofulous and marasmic, such success was very creditable.

DIFFUSION OF ARSENIC THROUGH THE BODY WHEN INTRODUCED AFTER DEATH.—Victor C. Vaughan, M.D., and James H. Dawson, Ph.C., have made experiments (abstract from "Contributions from Chemical Laboratory University of Michigan") with the view of determining whether or not arsenious oxide (common white arsenic) would diffuse through the body after it had been mixed with water and injected into the mouth or rectum after death, this having been the most important question which arose in a murder case tried in Michigan within the past year. They concluded, from experiments on dead bodies, that arsenic is widely diffused through the body when introduced after death, and that, therefore, in a case of suspected arsenical poisoning, if arsenic has been introduced into the body after death, the finding of the poison in the various organs is no proof that the arsenic was introduced during life and was the cause of death. Arsenical embalming fluids may, according to the above, be used as a means of covering up crime; and this fact should be borne in mind in cases of supposed poisoning by arsenic.—*Weekly Drug News.*

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 8, 1884, TO JUNE 21, 1884.

THE ARMY MEDICAL EXAMINING BOARD, New York City, is dissolved, to take effect June 14, 1884.

BROWN, JOSEPH B., LIEUTENANT-COLONEL AND SURGEON.—Upon completion of the business of the Army Medical Bureau, directed to comply with S.O. 44, current series, A. G. O., and return to New York City.

CLEMENTS, BENNETT A., MAJOR AND SURGEON.—Directed to await orders in New York City.

KIMBALL, JAMES P., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for two months and fourteen days, to take effect June 14, 1884, and ordered to relieve, August 28, 1884, Capt. Robert H. White, assistant-surgeon, from duty at U.S. Military Academy, West Point, N.Y. Capt. White, on being relieved, ordered to report in person to the commanding general, Department of California, for assignment to duty.

STERNBERG, GEORGE M., MAJOR AND SURGEON.—Relieved from temporary duty in Surgeon-General's Office, and ordered to assume the duties of attending surgeon and examiner of recruits at Baltimore, Md. S. O. 131, A. G. O., June 6, 1884.

FINLEY, J. A., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Stockton, Texas, and assigned to duty as post surgeon at Fort Concho, Texas. Paragraph 4, S. O. 69, Headquarters Department of Texas, June 2, 1884.

MAGRUDER, D. L., LIEUTENANT-COLONEL AND SURGEON.—Granted leave of absence for one month. Paragraph 7, S. O. 143, A. G. O., June 20, 1884.

HAPPERSSETT, J. C. G., MAJOR AND SURGEON.—Granted leave of absence for four months. Paragraph 5, S. O. 141, A. G. O., June 18, 1884.

MIDDLETON, PASSMORE, CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended three months, on surgeon's certificate of disability. Paragraph 3, S. O. 134, A. G. O., June 10, 1884.

BARNETT, RICHARDS, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon, Mount Vernon Barracks, Ala. Paragraph 2, S. O. 113, Headquarters Department of the East, June 9, 1884.

GARDNER, EDWIN F., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Walla Walla, Washington Territory, and assigned to duty as post surgeon, Fort Canby, Washington Territory. Paragraph 1, S. O. 75, Headquarters Department of the Columbia, June 3, 1884.

PORTER, J. Y., CAPTAIN AND ASSISTANT-SURGEON.—From Fort Ringgold, Texas, to Fort Brown, Texas, as post surgeon.

MADDIX, T. J. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Fort Clark, Texas, to Fort Ringgold, Texas, as post surgeon.

BLACK, C. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Fort Concho, Texas, to Fort Clark, Texas. S. O. 73, Headquarters Department of Texas, June 9, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM JUNE 8, 1884, TO JUNE 21, 1884.

P. A. Surgeon A. A. AUSTIN, detached from U.S. steam-ship "St. Louis," ordered to Naval Rendezvous, Philadelphia.

P. A. Surgeon J. M. EDGAR, detached from U.S. steam-ship "Wabash," ordered to U.S. steam-ship "Nantucket."

P. A. Surgeon L. B. BALDWIN, ordered to U.S. steam-ship "Wabash."

Assistant-Surgeon H. W. WHITAKER, detached from Naval Rendezvous, Philadelphia, ordered for examination preliminary to promotion.

Assistant-Surgeon F. A. HESLER, ordered to U.S. steam-ship "Minnesota."

Assistant-Surgeon V. C. B. MEANS, ordered to U.S. steam-ship "Vermont."

Medical Director J. M. BROWNE, to attend the International Health Exhibition at Liverpool, England, and delegate to International Medical Congress at Copenhagen, per steamer of July 2.

Surgeon I. R. TRYON, to same duty with Medical Director Browne, and, on completion of this duty, to report for duty on U.S. steam-ship "Quinnebaug."

Surgeon J. HUGG, detached from "Quinnebaug" on reporting of relief, to return home and report arrival.

Surgeon J. S. KNIGHT, ordered before Retiring Board.

P. A. Surgeon C. G. HERNDON, detached from "Albatross," ordered to attend officers of Navy and Marine Corps in Washington.

Surgeon J. M. FLINT, detached from Smithsonian Institute, ordered to Fish-Commission steamer "Albatross."

Assistant-Surgeon P. LEACH, ordered for examination preliminary to promotion.

P. A. Surgeon J. E. GARDENER, detached from U.S. steam-ship "Lancaster," ordered to U.S. steam-ship "Powhatan."

P. A. Surgeon J. C. BOYD, detached from U.S. steam-ship "Lancaster," ordered to U.S. steam-ship "Powhatan."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 12, 1884.

ORIGINAL COMMUNICATIONS.

NOTES OF A CASE OF DERMATITIS HERPETIFORMIS, EXTENDING OVER ELEVEN YEARS, ILLUSTRATING THE SEVERAL VARIETIES OF THE DISEASE.

BY LOUIS A. DUHRING, M.D.,

Professor of Skin Diseases in the University of Pennsylvania.

IN the following case the pustular, vesicular, bullous, and papular manifestations of the disease* were all developed on one or on several occasions during the long period the patient was under my observation. The characteristic features of the affection are clearly defined in the history, the notes of which, it may be remarked, were recorded at the time of each examination.

James W., æt. 38, a native of Philadelphia, and a wood-carver by occupation, was admitted to the Philadelphia Dispensary for Skin Diseases, January 16, 1873. According to the notes in the record-book, he was suffering from an imperfectly defined inflammatory, multiform eruption, composed of erythematous spots and patches which had evidently been the seat of previous disease, papulo-vesicles, pustules, and excoriations. It occupied the general surface, with preference for the arms and forearms, sacral region, buttocks, and thighs. The lesions were not very numerous, and were disseminated, except over the sacral region, where a dozen or more formed a conspicuous patch. The disease appeared to be fading away, and, inasmuch as the patient gave a history of having recently had quite active treatment, internal as well as external, and that he had been treated for supposed "secondary syphilis," the diagnosis was for the time being withheld. According to a note, the eruption resembled that resulting from the internal use of the iodide or the bromide of potassium.

He stated that he had been suffering from the disease for five years, and that while better, and even nearly well, at times, it had never entirely left him; it was the

source of great annoyance to him, itched considerably, manifested itself in different forms from time to time, and was apt to appear in distinct crops from week to week or month to month. He was not aware that he had ever contracted syphilis, but several physicians had assured him that the present eruption was a manifestation of this malady.

He was placed upon a simple tonic treatment until the diagnosis might be more definitely ascertained.

January 25.—New pustular lesions have appeared on the buttocks and on the thighs. These are highly inflammatory, flat, and incline to crust in the centre and to spread on the circumference. Alkaline lotions and baths were ordered; also a saline aperient.

February 8.—Considerable improvement, the disease being in about the same state as when the patient first came under observation.

February 12.—New lesions are appearing.

February 19.—The disease has been manifesting itself chiefly on the arms and on the buttocks, new pustules making their appearance from day to day.

February 24.—No new lesions; condition decidedly better.

March 19.—There has been steady improvement since last note. The remedies used during the past two months have been syrup of the iodide of iron; bitartrate of potassium from time to time; and a carbolic acid lotion.

May 12.—The disease continued improving during the last two months until within the present week, when a crop of new pustular lesions began to appear, scattered here and there over the general surface, especially upon the arms, buttocks, and thighs. The patient enjoys average general health, notwithstanding the eruption, which now is abundant, and is unusually active.

It may be described in its present state as a pustular form of disease, the lesions beginning as pin-head and split-pea sized, flat *pustules* with extensive, bright-red areolæ. They increase rather slowly in size, and soon begin to crust over with a yellowish-brown crust, after which they continue to increase in size by new, small, flat, pin-head sized pustules forming on the periphery. This process goes on until the

* For an account of Dermatitis Herpetiformis the reader is referred to my paper read before the American Medical Association, May 6, 1884, abstracts of which may be found in *New York Medical Journal*, p. 562, May 17, 1884, and in *Philadelphia Medical Times*, p. 603, May 17, 1884.

lesions assume the size of a dime or quarter-dollar, when it ceases and a crust covering the whole remains. The crust is adherent from the beginning; if detached, it shows a circumscribed, superficially excoeriated surface, covered with a puriform fluid. Later, at the end of two or three weeks, the crust drops off, leaving a dark-red, infiltrated spot, but no scar. These inflammatory infiltrations are slow to disappear, weeks being necessary for the larger ones to become effaced.

About the buttocks and sacral region and on the thighs the lesions show a disposition to occur in patches, and, moreover, to group, two or three not infrequently existing in such close proximity as ultimately to run together. Over the arms and elsewhere this tendency is not so noticeable; nor are the lesions here so well defined and large as on the back and thighs.

May 26.—The outbreak was at its height when the last note was recorded, since which date the eruption has been steadily declining.

November 3.—The patient has absented himself for six months. He states that he continued to improve through the summer, and that only within the last two months has the disease again become annoying. He was almost free from eruption at one period during the summer. Lately the disease has manifested itself in another form, the lesions being decidedly papular rather than pustular, and in distribution more scattered than formerly, and also much more itchy. Upon examination, the eruption was seen to have changed its character completely and to consist of disseminated, here and there distinctly grouped, variously sized and shaped, imperfectly formed *papules* and *papulo-vesicles*, which closely resembled eczema. He was again placed upon a preparation of iron, and a saline aperient, the bowels being habitually constipated.

November 18.—The eruption has entirely disappeared, leaving the skin pigmented in dirty-yellowish, brownish spots and patches, and in some places deprived of the normal pigment, dirty-whitish patches existing.

March 3, 1874.—Four months have elapsed since the last note. The disease has during this period been "better and worse." There have been several relapses, which have continued a fortnight

or longer and have disappeared as before. The patient has taken arsenic in the form of liq. potass. arsenit. in from two- to four-minim doses, but without benefit. Of late he has been using strong drink in excess, which, he states, is pretty sure to cause an exacerbation of the eruption. A new crop of lesions is to-day making its appearance. The character of the disease has again changed, the lesions now being *vesicular* and *pustular*, especially the latter, similar to the form of eruption that existed a year ago. The single lesions resemble ecthyma, while those in groups or patches bear a close resemblance to pustular eczema.

March 13.—New lesions are here and there manifesting themselves, the neck, lower portion of the back, buttocks, thighs, and arms being the regions chiefly invaded. Iron and arsenic are still being taken, and various antipruritic lotions and ointments have been employed, with, however, but little benefit.

April 3.—The pustular character of the eruption has ceased, and variously-sized herpetic *vesicles* and small *blebs* have lately developed. Many of them are as large as split peas. They appear quite suddenly and are very itchy. The disease has lately attacked the folds of the axilla and the pubes, which regions have become extensively crusted.

April 24.—The surface has again cleared off, only a trace of the former eruption remaining, in the form of primary lesions, but scratch-marks and pigmentation are everywhere present, the whole integument having a dirty, muddy, mottled look. Has been taking arsenic steadily; general health has remained good.

April 30, 1877.—Three years have elapsed since last note, and since the patient has been seen. The disease still exists, with the same history as formerly, the lesions being variable, papules, pustules, and vesicles occurring from time to time. During the past six weeks there have been several slight relapses and again a change in the character of the lesions, indistinctly defined, flat, variously sized and shaped *papules* appearing together, with here and there ill-defined abortive *pustules* and *papulo-pustules*. These lesions now exist. The patient considers himself, upon the whole, considerably improved. He has been taking the arsenic from time to time, in varying quantity, from one to five minims thrice daily.

January 15, 1879.—A year and a half has passed since the patient was last examined. He states that he has but little change to report. He has not been free of the eruption, and has had two very severe attacks and many slight ones. The severer attacks have continued three or four weeks, while the lighter ones come and go from week to week. He has had the eruption so constantly of late that no particular note has been made as to the occurrence of distinct outbreaks. The lesions have been coming and going without intermission. Within the year the lesions have been for the most part *vesicular* and *bullous*, or, as he expresses it, "they have been blisters of various sizes, containing a clear fluid." They have had a disposition to cluster, but there have also been many isolated, single lesions. They have been very itchy, so much so that he lost no time in scratching and rupturing them. He does not know whether they ever ruptured spontaneously, for he has invariably opened them as soon as they appeared. Lately all regions of the surface, except the palms and soles, have been attacked, the scalp even being the seat of numerous lesions, but preference is still shown for the regions before invaded.

March 2, 1879.—During the past two months he has been better than usual, the most annoyance being due to considerable eruption, vesico-pustular in character, about the scrotum. He has been drinking of late, with the hope, he states, of "bringing out the disease," but thus far without success. He has been better this winter than during any period within the past ten years. He is positive that the various forms of treatment employed have had little or no influence in controlling the disease. He is about as free of the eruption in summer as in winter, the seasons exerting no special influence upon his condition. His general health remains fair, although, owing to his irregular mode of life, he is dyspeptic, and, as a rule, is constipated.

DEATH FROM CHLOROFORM.—A physician, Dr. Godfrey MacRae, placed himself recently under the charge of Prof. Annandale, of Edinburgh, for the removal of a tumor in his neck. "While the chloroform was being administered prior to the necessary operation, Dr. MacRae, who was in the prime of life, suddenly died."—*Medical Press and Circular*, June 18.

REPORT ON RECENT PROGRESS IN PHYSIOLOGY.

BY ROBERT MEADE SMITH, M.D.,

Professor of Comparative Physiology, University of Pennsylvania.

THE FUNCTIONS OF THE INTRAVERTEBRAL GANGLIA.

THE classical experiments of Waller have shown that after division of the posterior roots of the spinal nerves, only that portion of the root still in connection with the spinal cord undergoes degeneration, while, when the anterior spinal roots are divided, degeneration occurs in the peripheral portion of the divided root. These experiments are universally held to prove the existence in the spinal cord of a trophic centre for the anterior spinal roots, and that the ganglion in the posterior spinal roots exerts a trophic influence over these roots both towards the spinal cord and towards the periphery.

P. Vejas (*Centralb. f. d. Med. Wissen.*, May 3, 1884) has, however, recently published some results obtained by experiments on animals, which, if confirmed, will necessitate a modification of the views of Waller above alluded to. He has found that, after section of the posterior root, not only does the portion in connection with the spinal cord degenerate, but the fibres in the portion of the root between the point of section and the ganglion, and in the ganglion itself, disappear, while the ganglion-cells remain perfectly normal: and when the peripheral sensory fibres are divided on the far side of the ganglion, the latter itself degenerates. If these results are correct, the function of the spinal ganglia is not as clearly established as is generally supposed.

On the other hand, experiments reported by Bechterew and Rosenbach, in the *St. Petersburger Med. Wochenschrift*, April 17, 1884, extend still further the views of Waller as to the trophic functions of the intravertebral ganglia, and show that division of the posterior spinal roots between the ganglia and the spinal cord causes extensive degenerative changes in the latter.

These experiments were performed by dividing all the spinal roots in dogs which go to make up the *cauda equina*, with a resulting anæsthesia of the tail, perineum, and inner surface of the hind legs, disordered gait, and paralysis of the tail and sphincters. In most cases

the animals died within four weeks, but some survived for two or three months and were then killed.

Examination after death showed in all cases, at the point of section, a limited inflammatory adhesion of the *cauda equina* with the spinal membranes, while microscopic examination of the central end of the divided posterior roots showed the well-known degeneration of the nerve-fibres with connective-tissue increase.

In the spinal cord itself an intense and extensive degeneration (vacuolization, atrophy, granular degeneration, and disappearance) was noted in the nerve-cells of the gray substance of both the anterior and posterior horns.

This degeneration was most marked in the lumbar enlargement of the cord, but extended with decreasing intensity throughout the entire length of the cord: degenerated ganglia-cells were even found in the nuclei of the medulla oblongata. The network of the gray substance in the inferior portions of the spinal cord appeared swollen and opaque, but without any distinct textural alterations, and there was also partial degeneration of the intramedullary prolongations of the posterior spinal roots, and occasionally, also, of the anterior roots.

In the cases in which the above-described alterations of the gray matter were most marked, as in cases where the division was practised higher up the cord, alterations were also noted in the white columns of the cord. In the inferior portions of the cord there was diffuse degeneration of the posterior columns. In the lumbar enlargement it was confined to the columns of Goll, and gradually decreased as the upper portions of the cord were reached. The degeneration of the prolongation of the posterior roots extended upward in the form of small bundles in front of the gelatinous substance of Rolando. A few nerve-cells in the cerebellar columns had also been the seat of degenerative changes.

The authors believe that they have been able to exclude all inflammatory processes in the production of the above results, and think that they are attributable to the disturbance of some trophic processes exerted on the cord by the intravertebral ganglia, while the degeneration of the columns of Goll and other ascending white columns is secondary.

Their investigations, therefore, prove that the separation of a number of intravertebral ganglia from the spinal cord produces a trophic disturbance in the ganglionic elements in the gray matter of the cord, most marked in the segment of cord whose posterior nerve-roots have been divided, and extending with diminishing intensity through the gray columns of the entire cord. Consequently, the intravertebral ganglia are to be regarded as the trophic centres of the nerve-cells of the gray matter of the spinal cord.

THE FUNCTION OF LIEBERKÜHN'S FOLLICLES IN THE LARGE INTESTINE.

Klug and Koreck (*Centralb. f. d. Med. Wissen.*, April 26, 1884) report the results of experiments performed on dogs with fistulæ of the large intestine, made in the same manner as the Vella modification of the Ludwig-Thiry fistula of the duodenum; that is, after opening the abdominal cavity, a portion of the large intestine, about ten centimetres in length, was excised without injury of its blood-supply, the continuity of the bowel restored, and the two ends of the excised portion of the gut united with the edge of the wound in the abdominal walls. Consequently, animals so operated on could normally digest food, while an isolated loop of large intestine was accessible for experiment.

The authors found that starch and fibrin introduced into the large intestine in gauze sacs was unaltered, and did not lose in weight: digestive action on these substances in the large intestine could therefore be excluded. No secretion could be produced by pilocarpine injections, while the contents of the intestine after killing the animals was a clear, inodorous, gelatinous mass of neutral reaction, only slightly soluble in water, and containing mucin and albumen. The extract of this mass exerted no digestive action on fibrin, starch, or oil.

On the other hand, they were able to establish clearly the absorbing power of the large intestine for oils; as, after the administration of milk and olive-oil, the cylinder-cells of the Lieberkühn follicle were filled with oil-globules. The authors consequently agree with Hoppe-Seyler in regarding these follicles, not as glands, but as mere extensions of the absorbing surface.

THE ACTION OF INFUSED BEVERAGES ON PEPTIC DIGESTION.

The important subject of the influence

of the infused beverages of every-day use on the rapidity and completeness of the digestion of food by the stomach has been considerably advanced by an important paper published by Dr. James W. Fraser in the *Journal of Anatomy and Physiology*, vol. xviii., part i.

From the fact that experiments having for their object the determination of the effect of different beverages on peptic digestion could only be carried out with an artificial digestive fluid, it is evident that the actions of the beverages on the vital processes of digestion, such as the secretion of the gastric juice, its amount and quality, and on the muscular movements of the stomach, are, by the nature of the experiment, ignored, although such points must be of the greatest influence on the result. Dr. Fraser's paper is confined to the discussion of the chemical action of a fixed quantity of a beverage on the digestion of a fixed quantity of meat by a fixed quantity of an artificial gastric juice of a definite composition. He finds that all the infused beverages retard the digestion of all meats which were subjected to experiment, with four exceptions,—viz., white of egg and ham in presence of coffee, and fish in presence of cocoatina and of cocoa. Under this general rule some exceptions were noted,—viz., that tea and coffee have much less action on the meats usually eaten at breakfast (egg, salt beef, and ham) than on other meats; that coffee has less action on these meats, as a rule, than tea; that cocoatina has more retarding action than either coffee or tea, and the same subdivision into a class of breakfast meats and a class of others is noticed, but less markedly than with tea and coffee; and that cocoa and chocolate retard the digestion of meats more than any of the former beverages, and no subdivision into two classes of meats is to be noticed in their case.

In his attempt to explain the causes which lead to this retardation of digestion, the author believes that tea reduces peptic action chiefly by its tannic acid, which acts by coagulating the albuminoids which have escaped the action of cooking, by tanning the gelatinous parts of the meat and causing them to contract and press on the albuminoids, by removing the pepsin itself entangled in the precipitates formed, and by precipitating syntonin and peptone as formed.

The action of coffee appears to be in the direction of favoring the digestion of ham and white of egg, and this must depend upon the power of the alkaloid to assist proteolytic action; but coffee, as a rule, retards the digestion of meats, and this must be caused by the caffeeo-tannic acid and by the volatile oil.

The action of cocoa appears to be in some respects intermediate between those of coffee and of tea. The action of its acid is slightly greater than that of caffeeo-tannic acid, but that of the volatile oil is less than that of the volatile oils of tea and coffee. But then the suspended matters of the cocoas give rise to the causes which produce the most important results in these experiments,—viz., the accumulation of peptones and the clogging action of the suspended solids; and neither of these would act in the case of digestion in the stomach, for the peptones would probably be absorbed as quickly as they are formed, and the clogging would be prevented by the stomach movements.

In retarding the consumption of acid during digestion, tea has the greatest effect; coffee has no more effect than water, and cocoa increases the consumption. Coffee and cocoa cause the peptic digestion of albuminoids to pass on through the stage of peptones to the formation of leucine and tyrosine.

Tea acts on the digestion of fresh meat so as to increase the production of flatus, but has no such effect with salt meat, and coffee has no more effect than water.

The addition of cream and sugar to the beverages reduces the retarding action of tea on digestion, but increases that of cocoa; and coffee appears to have its action reversed by these additions.

As regards the practical conclusions to be drawn from these experiments, it may be stated that if, at any meal containing albuminoid matters, one of these beverages be drunk instead of water, a reduction in the amount of peptone produced will occur: therefore, as such beverages decrease the nutritive value of foods, a larger amount of food is required to preserve the nutritive balance, and, by the amount of undigested matter which remains in the stomach, dyspepsia is apt to be produced.

The cocoas yield more nourishment than the coffees and teas, and it may be believed that, owing to the mixing action of the movements of the stomach, they

retard digestion as little as any infused beverage. They are therefore most suitable to cases where economy must be practised in the amount of food taken.

In the case of dyspepsia, besides the action of the beverages in precipitating albuminoids, if of the flatulent order, tea should be avoided when unsalted animal food is eaten, on account of the increase of flatus following their digestion together. In such cases, therefore, coffee would be the best beverage.

In acid dyspepsia, tea, from its power of reducing the consumption of the acid, is the worst beverage; coffee is neutral, and cocoa would be the best from its increasing the consumption of acid; though, if there is any tendency to the lactic acid fermentation, cocoa should be avoided on account of the sugar it contains.

As regards the time of using infused beverages, manifestly they should not be taken at meals which consist largely of animal food. This requirement has come to be very generally followed out, and most people make this undesirable combination only at breakfast; and Dr. Fraser has shown that the usual breakfast meats are those least acted on in digestion by tea or coffee, the latter, under such circumstances, being preferable.

A CONTRIBUTION TO THE PHYSIOLOGY OF THE PHRENIC NERVES.

Until now the phrenic nerves have been considered solely as the motor nerves of the diaphragm; but a recent communication of Von Anrep and Cybulski (*Pflüger's Archiv f. d. ges. Physiologie*, February 4, 1884) shows that the contested question as to the presence of sensory fibres in these nerves must be regarded as settled in the affirmative, since irritation in animals of the central ends of these nerves produces changes in the circulation and respiration, and often evidences of painful sensations.

Influence of the Phrenic Nerves on Respiration.—Irritation of the central end of a divided phrenic nerve in the dog, rabbit, or cat produces changes in the number and depth of the respiratory movements, which differ according to the strength and duration of the irritation. Thus, weak and short irritations (five to ten seconds) produce a slight increase in the rate of respiration, while longer irritations (twenty-five to fifty seconds) at first accelerate and then retard respiration, while the depth of the individual respiratory movements is

augmented. With stronger irritations, increase in strength and rapidity of respiration at first occurs, which gives place to a retardation; or the respiration may again become normal, and then even a further increase in the strength of the irritant is without effect. This proves that the sensory fibres of the phrenic nerves rapidly lose their irritability. In exceptional cases, irritation of these nerves in the neck produces expiratory arrest of respiration. These results are not modified by narcosis or by previous section of the vagi and superior laryngeal nerves.

Influence on the Blood-Pressure.—The first effect of the irritation of the central end of the phrenic nerves is to cause a considerable increase in the blood-pressure, which soon disappears; a second increase again is produced, and the normal pressure again regained, and so on. In other words, a curve is produced which is precisely similar to the so-called "Traube-Hering's curve." This result was not interfered with by section of the cardiac nerves in the neck or by opening the thoracic or abdominal cavities. But it was found that, when the functional activity of the vaso-motor centre was depressed, as by the administration of cadmium salts, or when the spinal cord was divided, these blood-pressure oscillations did not appear. It is, therefore, clear that these modifications of blood-pressure are due to the rhythmic increase in the tonic function of the vaso-motor centre produced by stimulation of the phrenic nerves.

When the phrenic nerves are stimulated, the vagi nerves being intact, in the ascending limb of the pressure-curve, there is an increase in the rate of the heart's pulsation, and a slowing of the pulse in the descending limb, entirely analogous to the phenomena noticed in respiratory changes in the blood-pressure. When the vagi are divided, there is no change in the number of the heart's beats: consequently, there must be a periodic stimulation of the inhibitory centre as well as of the vaso-motor centre.

The points of interest in the above communication are the periodic increase in the tonus of the vaso-motor centre, in animals with normal respiratory gas changes, produced by the stimulation of a single nerve; and the function which is thereby proved to be possessed by the phrenic nerve in regulating the adjustment

of respiratory movement and blood-pressure, possibly through the stimulation of its sensory fibres by the periodic contraction of the diaphragm.

THE ORIGIN AND DEVELOPMENT OF THE RED BLOOD-CORPUSCLES.

Prof. Bizzozero and Dr. A. Torre (*Virchow's Archiv*, Bd. xcv.) find in all adult vertebrates a continuous development of red blood-corpuscles through indirect division of previously existing, earlier forms; and, further, that in all such animals there exist special organs, one of whose functions may be regarded as being the seat in which the development of new red blood-corpuscles occurs. In mammals, birds, reptiles, and tailless amphibians, the bone-marrow represents this special organ; in the tailed amphibians it is the spleen, and in fish the spleen and the lymphoid parenchyma surrounding and constituting part of the kidney.

In the lower vertebrates (reptiles, amphibia, and fishes), the circulating blood possesses the characteristic, seen in the embryonal stage of all vertebrates, of containing young red blood-cells and others in the process of indirect fission. Both these forms of cell, however, are found in less numbers in the circulating blood than in the organs which in the different species of animals serve as the nidus of development of the red cells. This reminiscence of the embryonal state is more clearly seen in animals which have been subjected to repeated blood-letting; while, on the other hand, it becomes less evident or may even disappear under conditions which depress the general activities of the organism, such as confinement and deprivation of food.

Prof. Bizzozero further disputes as purely hypothetical the hæmatoblast theory of Hayem and the assumption that the white blood-corpuscles develop into red.

As regards the development of red blood-corpuscles in adult forms, he claims to have observed under the microscope the division of the red blood-disks by kariokinesis, and finds in this process the source of new blood-cell formation, the resulting form being what he terms young blood-cells. From the earliest stage of embryonal life there is no period in which this form of division of the red blood-disks is not constantly occurring, the activity of the process depending on the

greater or less need of the system for new red blood-cells. In the embryonal stage of mammals the red blood-corpuscles multiply in this manner in the circulating blood, in the liver, in the spleen, and in bone-marrow, while the last-named organism preserves the function of serving as a nidus for new blood-cell formation throughout the entire life of the organism.

In the frog, the kariokinesis is confined to the bone-marrow; in the embryo of the chick it at first occurs in the circulating blood, then in the spleen, and finally in the bone-marrow, where it is continuous. Thus, with the exception of the liver, which is inconstant in possessing this function in birds, the stage and localities of development are the same in the bird as in mammals.

THE FIRST DERIVATIVE PRODUCTS OF ALBUMINOIDS.

From his earlier studies, Kühne was led to the conclusion that the albuminoid molecule was composed of two preformed groups, *antialbumid* and *hemialbumin*, which, under the action of the gastric juice, are converted into the corresponding peptones, but which differ in their resistance to peptic digestion. Between these albuminoids and their respective peptones occur, as intermediate stages in gastric digestion and in the action of simple acids, *antialbumose* and *hemialbumose*. Further, the two peptones differ in their behavior to *trypsin*: thus, hemipeptone is split by the action of trypsin into leucine and tyrosine, but an insignificant amount of peptone remaining unchanged, while the antipeptone remains entirely unaffected in pancreatic digestion.

Kühne and Chittenden (*Centralbl. f. d. Med. Wissen.*, May 10, 1884) have carried these studies considerably further, and publish an elaborate account of the properties of these bodies* and of the means of isolating them from egg-albumen, serum-albumen, and syntonin. Their chemical composition they place as follows:

	Anti-albumid.	Anti-peptone.	Hemi-albumose.	Hemi-peptone.
C. . .	53.79	49.87	50.96	49.38
H. . .	7.08	6.89	6.85	6.81
N. . .	14.55	15.21	15.88	15.07
S. }	24.58	28.03	1.45	1.10
O. }			24.86	27.64

With the exception of the antialbumid, the C. is in much smaller proportion in

* See page 710, ante.

these bodies than in other albuminoids, a fact which is in harmony with the conception of these bodies as hydrates of albumen.

Antialbumid is best obtained by prolonged heating at 100° C. of coagulated, washed white of egg, with 0.5 per cent. H_2SO_4 , washing with water and digesting with gastric juice, in which it is insoluble but is converted into a gelatinous body. If then treated with trypsin in soda solution, it is converted into antipectone, which may be precipitated with alcohol. Trypsin is incapable of converting this form of peptone into leucine or tyrosine.

Antialbumose cannot be obtained by the action of acids alone, but only by fractional peptic digestion. When formed, it is readily converted into antipectone by the action of trypsin.

Hemialbumose and hemipeptone are obtained by a short, continued action of gastric juice on coagulated albumen and subsequent neutralization, filtration, drying, and precipitation and washing with alcohol. If the precipitate is washed with cold water, peptone and a part of the hemialbumose pass into solution.

These products are obtained in a similar manner from serum-albumen.

TOXIC EFFECTS OF COCCULUS INDICUS ON MAN: WITH A COMPARISON BETWEEN STRYCHNIA- AND COCCULUS-INDICUS-POISONING.

BY FRANCIS L. HAYNES, M.D.

IN 1879, while a medical student, I witnessed and noted the following unjustifiable experiments, made by M. J. For obvious reasons, the name of the experimenter is withheld; but I can vouch for the accuracy of the report.

The preparation used was a tincture, made by percolation, with six ounces of powdered cocculus Indicus, and one-half ounce of tartaric acid, to the pint.

I.—Adult male. Beginning with a small dose, the quantity was gradually increased until one ounce daily was taken, and this was continued for two days. The only effect was slight subjective vertigo, lasting about half an hour, each morning. He felt, to use his own words, as if "his head were turning around."

II.—Boy, aged 12. The dose was the same as in the first experiment, and produced a similar effect.

III.—Adult male. When two ounces a day in divided doses were taken, severe frontal headache became an almost constant symptom. After taking this quantity for three days, three epileptiform convulsions occurred, at intervals of fifteen minutes. Two hours after the last convulsion I saw him. He was vomiting violently, and unable to recognize any one. This man, however, confessed to having taken the medicine from the bottle without measurement.

IV.—Male, aged 35. After taking three ounces daily for four days, he uttered an inarticulate sound, became convulsed, and would have fallen had he not been quickly seized and placed in bed. There he became rigid, with head bent back and lips blue. These symptoms lasted for a few seconds.

Thirteen minutes after the first convulsion, I visited him, and carefully watched his symptoms until he recovered. His face presented a wild expression, and he either failed to answer questions, or did so inarticulately. He vomited his dinner, which he had eaten about half an hour previously.

In twenty-two minutes, the hands began to jerk, then the arms, then the head and feet. In twenty-five minutes, the jaw was pulled downward and the head drawn firmly backward, the chest became rigid, the forearms flexed at right angles with the arms, and the legs straightened out stiffly. At the same time the whole body jerked violently, and the lips became black. The pupil was unchanged. The whole paroxysm lasted but a few seconds. He now remained relaxed and motionless for two minutes; then the jerking motions already described were noted, and continued for one hour. Consciousness was lost during the convulsion, and did not return for fifteen minutes. Another attack of vomiting, profuse perspiration, and frontal headache, were subsequent symptoms. He was able to sit up the next day, but complained of weakness and headache.

To sum up, cocculus Indicus in moderate doses produced subjective vertigo; in larger doses, severe frontal headache, and, if continued, terrible epileptiform convulsions, followed by vomiting.

The following table presents the com-

parative results of the administration of strychnia and cocculus Indicus to man :

STRYCHNIA.

1. All stages of strychnism may be produced at will by the careful regulation of the dose.

2. The patient is perfectly conscious during the convulsion.

3. The convulsions are mainly tonic, as in tetanus.

4. Never causes vomiting.

COCCULUS INDICUS.

1. When a sufficient quantity has been taken, violent convulsions occur, without definite warning. They are explosive.

2. The patient is entirely unconscious during and after convulsion, as in epilepsy.

3. The convulsions are *mainly* clonic.

4. Frequently causes vomiting.

REFERENCES.

Sozinsky (*Philadelphia Medical News*, November 3, 1883) makes some interesting remarks, and gives a fatal case, the principal symptoms of which were epileptiform convulsions, with vomiting and purging, and which was treated with morphia hypodermatically. He states that no other fatal case is on record; but one can be found in Mitchell (*Therapeutics*, Philadelphia, 1850, 312) which is almost the counterpart of Sozinsky's case.

W. B. Thompson (*Medical Examiner*, N. S., v. 227) records an instance in which the application of a strong tincture of cocculus to the scalp of a child six years old was followed by tetanic convulsions and contracted pupils, and resulted in death.

J. Crichton Browne, of Wakefield, on "Antagonism between Picrotoxin and Chloral," shows that these drugs are antagonistic within certain limits. See also *New Remedies*, October, 1875.

On general principles, chloral or chloroform is worthy of trial in cocculus-poisoning.

280 EAST CUMBERLAND STREET, PHILADELPHIA.

NEW YORK STATE PHARMACY LAW.—Governor Cleveland having signed the State Pharmacy Bill, hereafter every pharmacist and druggist in the Empire State must be either a graduate in pharmacy or a licentiate. A board, consisting of five representative pharmacists, to be known as the State Board of Pharmacy, will be appointed at once. The New York State Pharmaceutical Association, at its meeting on June 10, nominated ten candidates for the position, from which the Governor will select five to constitute the Board.

AN EXPERIMENTAL RESEARCH ON THE UTERO-PLACENTAL CIRCULATION.

BY J. P. PYLE, M.D.

(Continued from page 715.)

OBSERVATIONS ON SEPTICÆMIA IN PREGNANT ANIMALS.

A SECOND series of experiments will now be detailed,—*i.e.*, those undertaken with the idea of transmitting minute fungi (micrococci) from the mother to the foetus by producing artificial septicæmia in the mother.

Experiment XX.—Some purulent matter was injected into the subcutaneous tissue of a pregnant rabbit. On the third day following, the animal died from septic poisoning. About one hour after the animal died, a post-mortem examination was made. The blood of the mother was found to contain the micrococci. A slide was prepared by dipping one end into the left ventricle of the heart immediately after cutting it open sufficiently for that purpose. The blood so obtained was found crowded with the fungi. The organs of the mother were not examined, but the foetuses, two in number, gave the following results. First foetus, the liver, spleen, and kidney were the only organs examined. In all the sections made from these tissues minute objects were seen, which were proved to be micrococci. Second foetus, the spleen, lung, heart, and thymus gland were examined. In each instance the fungi were found. The placenta also contained them. Cord not examined.

Experiment XXI.—A pregnant rabbit was inoculated in the trachea with erysipelatosus matter. On the fifth day the animal died from septicæmia. A post-mortem examination was made almost immediately after death. The blood of both mother and foetuses was found swarming with micrococci. Examination of the foetuses gave the following results. First foetus, brain the only organ examined. It contained the micrococci. Second foetus, the lungs of this one contained micrococci. Third foetus, the liver and spleen of this one contained micrococci. Fourth foetus, sections of the extremities showed the micrococci. Placenta and cord both contained the fungi, the latter showing them very distinctly. The vessels being large, the blood-corpuscles having dropped out, the micrococci could be plainly seen adhering to the vessel-walls.

Experiment XXII.—Some diphtheritic false membrane was placed beneath the skin on the back of a pregnant rabbit. In four days the animal died from septic poisoning. But a short time intervened between the death of the animal and the post-mortem examination. Micrococci were found swarming in the blood of the mother; foetal blood not examined. The foetuses, five in number,

were all examined, and all found to contain micrococci, they being lodged in the various tissues of the body. They were also present in both placenta and cord.

Experiment XXIII.—Placed some putrid matter in the side of a pregnant rabbit. Five days later, the animal died from septicæmia. Animal examined a few minutes after death. Both maternal and foetal blood contained the micrococci, the white blood-corpuscles in many instances being full of them. The foetuses, three in number, all contained the micrococci. They were also found in the placenta. Cord not examined.

Experiment XXIV.—About a drachm of erysipelatosus matter was introduced into the side of a pregnant rabbit. Five days subsequently the animal died from septic poisoning. Both the maternal and the foetal blood contained micrococci. Examination of the foetuses, five in number, all contained the micrococci, as did the placenta and cord.

Experiment XXV.—Some erysipelatosus matter was placed in the deep cellular tissue of a pregnant rabbit. Four days subsequently the animal died from septic poisoning. An examination gave the following results: both maternal and foetal blood contained the micrococci. They were also found in each of the five foetuses, the livers especially being full. Placenta not examined.

Experiment XXVI.—A piece of false membrane from a case of diphtheria was placed beneath the skin of a pregnant rabbit. On the third day following, the animal died from septicæmia. Both the maternal and the foetal blood contained micrococci. Sections made from the foetal tissues showed a wide distribution of the fungi. Placenta and cord also contained them.

Experiment XXVII.—A pregnant rabbit was inoculated with some erysipelatosus poison. The animal died in four days. Both the maternal and the foetal blood, examined soon after death, contained the micrococci. In each of the five foetuses they were also found in profusion. Placenta and cord both contained the fungi.

Experiment XXVIII.—Some decomposing pus was injected beneath the skin of a pregnant rabbit. Animal died on the third day. Both maternal and foetal blood contained the micrococci, they being, as noted in some previous cases, crowded in the colorless corpuscles of the blood. The fungi were found in the tissues of all three of the foetuses, being present as well in the placenta and cord.

Experiment XXIX.—Some erysipelatosus matter was placed under the skin of a pregnant rabbit. Five days subsequently the animal died from septic poisoning.

Post-Mortem Examination, one hour after death.—Blood of both mother and foetus crowded with micrococci. The foetal tissues also contained the fungi, as did the cord. Placenta not examined.

CONTROL EXPERIMENTS.

To see whether or not micrococci would arise spontaneously in pregnant animals killed without inducing septicæmia, I procured two additional pregnant animals to test this point. My notes concerning these experiments read as follows:

Experiment XXX.—A large rabbit, far advanced in pregnancy, was killed by puncturing the medulla oblongata. Immediately a careful examination was made of the maternal blood, taken from the heart of the animal, also from the placenta and cord. Each of the six foetuses was examined by the same methods as were adopted in previous experiments. No trace of micrococci or any other fungi could be discovered in any of the preparations made, nor could I find any extraneous or accidental contamination, like particles of blue material.

Experiment XXXI.—A large, pregnant rabbit was killed in a similar manner as in the last experiment. The autopsy was purposely delayed eighteen hours. Blood then taken from the animal's heart showed no micrococci. There were, however, some red bacteria and a few bacilli present,—organisms peculiar to putrefaction. The foetuses were carefully examined, but not a trace of micrococci could be seen, nor could putrefactive fungi be discovered.

OBSERVATION IN MAN.

In this instance the subject of observation was a pregnant woman, who, in the eighth month of gestation, died from septicæmia, in the lying-in wards of the Philadelphia Hospital. About one hour after the woman's death, in company with Dr. Formad, I attended the post-mortem examination. There were no signs of decomposition, and the body was yet quite warm. The foetus was removed by Cæsarean section, and nothing abnormal could be discovered, except that it appeared colder to the touch than the maternal parts, which was taken as evidence that it had died before the mother. An immediate examination of the maternal and the foetal blood was made, and they presented absolutely identical appearances, which were as follows. Excess of white blood-corpuscles, rather more evident in the foetus. In each case a small amount of precipitated fibrin was observed, as well as multitudes of micrococci. These were partly in zoöglea masses, partly free or infecting the white blood-corpuscles. A few chains of micrococci could also be seen. The blood was also examined by

Dr. Formad and other physicians then present. Tests were subsequently applied to be sure that the objects in question were micrococci and not granular or extraneous matter. The examination was made with a twelfth immersion lens. Portions of the organs of both mother and foetus were immediately immersed in alcohol, and, subsequently, sections were made and mounted. The details of the examination are briefly as follows. The blood of both mother and foetus was first inspected: a small quantity was carefully taken from the cavity of each heart by dipping in, through an opening made, a glass slide. The blood was proved to be profusely infested with the micrococci. Of the maternal organs examined, the heart, liver, and kidneys all contained the micrococci. The tissues of the foetus showed, by a microscopical examination, an abundance of micrococcus emboli identical with those of the mother. In the tongue, liver, and lung were found the micrococci; even the small vessels of the ear were filled with a granular matter which, under a higher power and by means of appropriate tests, was proved to be the same species of bacteria-micrococci. They were also found clinging to the capillary walls of the umbilical cord.

In connection with this evidence that solid particles may pass from the mother to the foetus by the placental circulation, I desire to quote a remarkable case of Prof. Friedrich, of Heidelberg, described by him in *Virchow's Archiv*, vol. xxxvi. p. 465. It concerns a case of metastasis of a malignant growth from the mother to the foetus. The case in question concerns a pregnant woman, æt. 37, who came under Prof. Friedrich's observation. The clinical diagnosis was cancer of liver, with metastasis to the skin, bone, mammary gland, uterus, ovary, serous membranes, thyroid, and lymphatic glands. The patient was in a very low condition, but gave birth to a child at full term. She died on the ninth day following delivery. The child, a boy, was also affected with a tumor about the size of a walnut, situated in the subcutaneous connective tissue at the knee. It died on the sixth day following its birth. The autopsy confirmed the above clinical diagnosis, revealing large cancer-masses in the liver and smaller ones in the other organs, as above mentioned.

On the whole, I do not agree with Prof. Friedrich in calling the liver-tumor pri-

mary under the circumstances given; but this does not interest us at present, and, again, it is a question of secondary interest. But what is of primary importance and does interest us just now is the metastasis of the tumor from the mother to the foetus in utero. As above stated, the child was born with a tumor at the knee, and autopsy of the infant's body showed, in addition, a tumor-thickening of the peritoneum at the entrance of the umbilical cord, the size of which is not given in the record. Microscopic examination made in the Heidelberg Pathological Institute proved the new formation found in the mother identical with those found in the foetus,—viz., of carcinomatous nature.

SUMMARY OF EXPERIMENTS.

From the above record of my experiments it is seen that the transition of solid particles from the mother to the foetus is an established fact. An analysis of the experiments shows as follows:

Nineteen experiments were made with the ultramarine liquid. With one exception, I found the blue well distributed in the maternal organs. The total number of foetuses obtained from these animals was sixty-one. Of these, forty-six gave positive results; i.e., the foetal tissues were impregnated with blue granules in varying quantity. Only fifteen of these foetuses gave negative results; i.e., blue granules were not found. Of the placentas, only fifteen were examined,—thirteen of these showing blue granules and two giving negative results. Of the thirteen umbilical cords examined, eight gave positive and five negative evidence.

It is also seen that ten experiments were made with septic poisonings, with the object of studying the transition of bacteria from the mother to the foetus. The maternal tissues were in every instance impregnated with bacteria. Of the thirty-nine foetuses examined, in every one identical bacteria were discovered. Eight of the placentas gave positive results, as well as seven of the umbilical cords examined. The control experiments, two in number, made with the object to determine whether or not the bacteria were of accidental occurrence, gave negative evidence. It is true that putrefactive bacteria do occur in animals after the lapse of a certain time after death, and this I observed in the blood from the heart of the animal which

was examined eighteen hours after death. But even here the foetuses were free of them. Moreover, it can be seen from my experiments that the examinations were made immediately after death or within a few hours, and that only bacteria pertaining to septicæmia (micrococci) were seen, and not the organisms of putrefaction, which are dumb-bell-shaped and rod-like.

The few negative results are certainly of little significance in contrast with the many positive observations, especially in view of the difficulty in making the examinations. In many instances, especially in the case of the ultramarine liquid, I at first had regarded the results of some experiments as negative when, after a prolonged search, they proved otherwise, a new portion of the same tissue yielding at once the blue granules.

The observation in the human being which I had the exceptional opportunity of making I regard of still greater importance than all the experiments combined. As described above, I have observed that the bacteridian disease of the mother is transmitted to the foetus. The examination of the foetus in this instance, which was removed by Cæsarean section, was made one hour after the death of the mother. In this case also the bacteria in the blood and tissues of the foetus could surely not be accidental.

I do not stand alone in bringing forward proof of the proposition that solid particles may pass from mother to foetus. Perls (*Lehrbuch der Allgemeinen Pathologie*, II. Theil, 1879), Caspary (*Vierteljahrsschrift für Dermatologie und Syphilis*), Reitz (*Sitzungsber. d. Akad. d. Wiss. Wien*, 1868, lvii.), all quote personal experiments and observations of others which prove that solid particles can pass from mother to foetus. The observation of Prof. Friedrich of cancer metastasis from mother to foetus in utero is also extremely interesting and suggestive in connection with this question.

There are on record some few observations which are opposed to the facts brought forward. Most of them, however, are mere statements. The only instance worthy of mention is that of Prof. Greenfield (*Lancet*, December 18, 1880), who denies that the bacteridian disease is transmitted to the foetus, stating that the blood and tissues of the foetus of an animal dying of anthrax were found not to

contain bacilli, whilst those of the mother swarmed with them. Speaking in general, the experiments of my predecessors on this subject are far from conclusive, being limited to but few trials, and showing little evidence of accuracy.

I think that Cohnheim's theory of the emigration of the white blood-corpuscle, which has been proved lately by himself to be a mere passive process of filtration through the blood-vessel walls, is a fair analogy to what we may find in the transition of solid particles through the attenuated utero-placental walls.

WILMINGTON, DELAWARE, March 10, 1884.

SUBINVOLUTION OF THE UTERUS AND INFLAMMATION OF VULVO-VAGINAL GLANDS CAUSED BY PORTION OF RETAINED PLACENTA.

Read before the F. Aitken Meigs Medical Association

BY C. C. DAVIDSON, M.D.

DURING the early part of December, 1882, Mrs. H. S., aged 34 years, called on me for the treatment of what she supposed to be gonorrhœa contracted from her husband.

On examination, the vulvo-vaginal glands of each side were in a high state of inflammation; suppuration had already taken place, and, on pressure, a thin yellow fluid oozed out. The vagina was hot and congested, and painful to the touch. The uterus was enlarged, the sound entering fully four inches. The os gaped, and from it issued a thick yellowish discharge tinged with blood. The lymphatic glands in each groin were enlarged, especially on the left side, and painful on pressure. She suffered from constant pain in the lower part of the back; complained of a dragging sensation in the stomach,—the pain in the back extending along the lower extremities. Headache was constant. Her general health was not good; the appetite was poor; she passed urine frequently, the act being always accompanied with pain. The patient was very anæmic, this condition being probably caused by the almost constant dribbling of blood from the uterus.

The following is the history, as obtained from the patient. Her menstruation began at eighteen years, and she was regular up to date of her marriage. She soon

became pregnant, and was delivered of a female child after an easy confinement, this occurring in 1878. In the month of May, 1880, she again became pregnant; a few months later she produced an abortion upon herself by means of a quill. A few days after, while lying upon her back on the floor, her child accidentally fell across her stomach with some force and causing some pain. Within twenty-four hours a pinkish vaginal discharge appeared, and a day or two later the abortion took place. While under medical treatment, she received a sudden fright, which caused her to jump from her bed and run down-stairs. This was followed by a severe hemorrhage, controlled, however, by the attending physician. When she was able to be about, she noticed a constant dribbling of blood from the vagina, and her menstrual discharge amounted to flooding, lasting ten days. At this time she placed herself under the care of a female physician, who treated her for several months without any benefit.

When the patient came under my care, after forming my opinion of the condition of things, I first treated the supposed specific discharge and poulticed the inflamed vulvo-vaginal glands, ordering as a vaginal injection alum and zinc; and I gave her also a mixture containing iron, quinine, and strychnia as a tonic. This plan of treatment was soon followed by an amelioration of the inflammatory condition, and in the space of a week the discharge ceased. I will here state that I used for the irritation of the bladder twenty drops of fluid extract of kava kava, given by the mouth, three times daily, with marked success.

While my treatment for the inflammatory condition was a success, the treatment to arrest the constant dribbling of blood was to a certain extent a failure. She had taken *ol. erigeron. Canadensis*, *ergot*, chloride of ammonium, etc., which held the bleeding in check, but never completely arrested it.

Having come to the conclusion that the hemorrhage came from some intra-uterine growth or the remains of the placenta from the abortion, Dr. E. P. Bernardy was called in consultation on January 31, 1883.

After making a thorough examination, it was decided that the hemorrhage arose from a diseased condition of the endo-

metrium, with likelihood of presence of remnants of placental tissue. Prior to our coming the next day, the patient was instructed to wash out the vagina with a solution of potassium chlorate (3ii to aqua Oss). A large sponge tent was then introduced, and left in position for twenty-four hours.

The sponge tent being taken out, February 1, 1883, the os was found perfectly dilated. It was hooked with a double tenaculum and the uterus pulled down. On introducing the finger, the lining of the cavity was found roughened, and in the upper left corner of the uterus an elevation. On scratching with the fingernail, a piece was torn off, which on examination was found to be placental tissue. The uterus was well curetted and thoroughly cleansed of all adventitious material, about a tablespoonful of which came away. After the curetting was completed, the cavity of the uterus was thoroughly swabbed out, several times in succession, with Churchill's tincture of iodine; all signs of hemorrhage ceased, and the uterus contracted nicely. The vagina was washed out with hot water, the patient placed in bed, and a suppository, containing opium and belladonna, was given by the rectum, to be repeated every four hours; three grains of quinine were taken internally every three hours. The patient was requested to lie in bed and keep perfectly quiet for a week. There was no bloody discharge, and at the end of ten days the patient called at my office. Examination with the sound found the uterus reduced to three inches. I made an application internally of equal parts of tinct. iodine and glycerin, and at the same time I enjoined the patient to go home and remain quiet; instead of which, she went out shopping, walking about thirty blocks, the same evening attended the theatre, and wound up with a late supper.

Next morning I was sent for. Found the patient suffering excruciating pain in the lower part of the abdomen, pulse 120, temperature 102° F., and slightly delirious. Diagnosed pelvic cellulitis, and applied hot poultices to the abdomen; administered internally one grain of powdered opium every two hours, and a fever-mixture containing one drop of tinct. *aconiti radidis* with each dose. My next visit found the patient easier. This treatment was continued for several days, the patient

gradually improving. In the left inguinal region I could then feel a hardened mass.

Dr. Bernardy was again called in, and, on making a vaginal examination, a large indurated mass, partly surrounding the uterus and pushing it down, was found on the left side of the pelvic cavity. By making combined external and internal palpation, the mass was easily outlined. My diagnosis was confirmed, and it was decided to apply a blister externally, with opium-and-belladonna suppositories to allay pain, hot-water vaginal injections, and internally a mixture containing hydrarg. chlor. corros., potassium iodide, and ammonium chloride.

The mass was of such a size that it pressed upon the sacral plexus of nerves, producing the most agonizing pain running down the leg, the pain being somewhat relieved by applying veratria ointment along the nerve and keeping the limb well wrapped in cotton-wool. Under treatment the mass was slowly absorbed, and the patient gradually regained her health.

From a study of this case we learn that palliative treatment for hemorrhage was of no avail. It has taught me two things:

First. In all cases of obstinate hemorrhage from the non-pregnant uterus, to dilate the uterus and examine the cavity,—that is, if the hemorrhage be not caused by a cancer of the neck or a vaginal polypus.

Secondly. In making any internal application to the cavity of the uterus, the patient ought to be told of the risk she assumes if the physician's orders are not implicitly carried out. I am satisfied that the above attack of cellulitis was brought on by the patient's indiscretion.

P.S.—Since reporting the above case, the patient called on me, and her improvement has been so marked that I did not recognize her at once. She has increased in weight, and states that she has never enjoyed better health.

PHILADELPHIA, 200 SOUTH TWELFTH STREET.

A BOSTON CREMATION SOCIETY.—The New England Cremation Society has been organized in Boston. The fee for membership is one dollar and a half per month, or twelve dollars annually, which confers the right to the member to have his body cremated without further expense. A building in accordance with the latest designs and improvements will be constructed.—*Popular Science News.*

A CASE OF JAUNDICE DUE TO A FIBROUS GROWTH OBSTRUCTING THE BOWEL AND CAUSING FATAL PERITONITIS.

BY JAMES H. WROTH, M.D.,
University of Pennsylvania.

IN the spring of 1883 I first met Mr. A. C., and up to October 1 he was, to all appearances, in good health. About October 1 he left for Colorado, returning to this place in the early part of January, 1884, and upon his arrival placed himself under my charge.

My note-book reads as follows:

January 17, A. C., 39, white, single, born in England.

Previous History.—Good. Has enjoyed good health prior to this attack. Has lived in Australia, California, and England. No hereditary predisposition. Has never had an attack of serious illness.

Uses stimulants moderately, chiefly at meals. Smokes moderately.

In October, while in Colorado, had an attack of "biliousness," which came on suddenly, followed by jaundice. Does not know what remedies the physician employed. Complains of general malaise, inability to sleep or lie upon the right side, and has fever every afternoon, lasting until 6 P.M. Skin burning and itching; no headache; tongue coated,—white, moist, with gray centre; appetite ravenous; bowels moved daily; passages "white, but loose;" urine high-colored; unable to retain it all night; rises two and three times to empty bladder. Pulse 80; temperature normal.

Examination shows body slightly emaciated. Present weight, one hundred and fifty-four (normal, one hundred and ninety-six). Chest and heart normal; stomach and intestines slightly tympanitic, chiefly over descending colon; liver enlarged, lower edge extending one and a half inches below ribs and in median line, half-way between umbilicus and sternum; spleen apparently normal; palpation causes slight tenderness in vicinity of gall-bladder,—patient says not severe enough to be pain; entire body jaundiced deeply. Examination of urine shows biliary acids. Ordered hydrarg. chlor. mite gr. iv at once; ammonii chloridum gr. xv after meals, and Apollinaris water f $\frac{3}{4}$ iv before breakfast daily.

19th.—Appearance unchanged. Bowels not moved since 17th; sleeps better, but complains of the itching of skin; fever not as high as formerly; can retain urine better. Medicines continued; enema at night.

February 1.—Bowels moved daily since last report, and darker in color; retains urine all night; urine lighter in color; fever has disappeared; complains of an obscure pain in bowels during past three days, which he can-

not definitely locate; palpation reveals no markedly tender spot. Ordered potassium iodide gr. xi three times a day,—before breakfast, and after other meals.

3d.—Jaundice seems better; conjunctiva clearer; bowels same as before; no tenderness of abdomen; liver still enlarged; says he is "all right, but weak." Ordered ung. hydr. iod. rub. (gr. iii to $\mathfrak{z}$ i) applied at night over liver; also iodide potash to be doubled every week until $\mathfrak{f}\mathfrak{z}$ ij are taken, three times a day,—equal to 33 grammes daily.

11th.—Patient says he is well. Jaundice is largely gone; other symptoms—itching, fever, difficulty with urine, insomnia—better. Medicine continued, and tepid baths ordered.

19th.—Called to see him at daybreak. Found him suffering intense pain in region of stomach; relieved by morphia hypodermically. Says he ate some cheese the evening previous, and attributes attack to that. Pulse 90; temperature normal.

During the day pain subsided. Says he had a good operation last night.

20th, A.M.—Pain returned in force and violence, resembling that of passage of gall-stones; morphia by mouth and hypodermically; hot-water applications to abdomen. Tenderness over stomach and liver. Pulse 96; temperature above normal.

P.M.—Pain still marked when morphia wears out; bowels becoming tympanitic and tender, vomiting contents of stomach; urine passed freely, high-colored; fever setting in; mind clear. Morphia hypodermics continued; chloral by mouth and applications continued.

21st, AM.—Signs of peritonitis; pulse small, rapid, compressible; general pain, vomiting.

Consultation.—Diagnosis of obstruction. Full doses of morphia hypodermically, linseed-meal poultices, beef-tea, and injections of warm water.

22d.—No change. Vomiting increased, rejecting a liquid resembling bile; no fecal odor; large injections of turpentine emulsion, with no result; hot turpentine cloths to abdomen; nutrient enema; whiskey per mouth and rectum; morphia continued. At noon pain ceased; other symptoms continued, pulse ran up rapidly, temperature increased. Patient died during night, from exhaustion. Mind clear to time of death.

Post-Mortem.—Lungs and heart healthy.

Abdomen.—General peritonitis; all organs bound together by lymph; local points of inflammation in various parts of small intestine; inflammation of colon at sigmoid flexure; rectum healthy; liver enlarged; hepatic substance healthy; gall-bladder enlarged, filled with bile; no gall-stones in the gall-bladder or intestines; spleen slightly enlarged, friable; stomach congested at middle of lower curvature; mucous membrane denuded for a space of three inches by four; pancreas disorganized, breaking down upon handling.

Surrounding the pylorus, and extending along the duodenum for some distance, including the ductus communis and pancreatic duct, was a fibrous tumor about an inch and a half thick. In it was included part of the hepatic ducts and cystic duct.

Below this tumor, for a distance of ten or twelve inches, the intestine was almost gangrenous, but not contracted. That part of the intestine included in the tumor was contracted; it would admit a lead-pencil. This contraction existed in the ducts.

The case, during life, was regarded as jaundice with an undetermined cause, and the treatment was entirely empirical. The fatal attack was considered one of obstruction of bowel, situated high up, and, until the post-mortem revealed it, no suspicion was entertained of the existence of a tumor.

This being sufficient to explain the hepatic trouble and the fatal attack, the question arises, why did it not manifest any signs of its presence during life?

The principal features of the case were—

1. The previous good health of the patient, and the sudden development of jaundice.
2. The inability to discover any obstruction, and the absence of gastric symptoms.
3. The gradual disappearance of the jaundice.
4. The sudden and rapid course of the fatal attack, with obstructive signs.

Granting that errors might have been made in examination, it might reasonably be expected that a pyloric tumor would produce a train of gastric symptoms sufficiently marked to produce a clue.

From the size of the tumor, it must have been some time developing; the hepatic trouble had existed about four months, and the course of the fibres in the tumor embraced the pylorus and bile-ducts like a ring, yet no apparent trouble about the pyloric orifice could be detected.

At no time did the patient complain of pain in that region, or present any of the constitutional signs of cancer. The tumor, as before stated, was fibrous, resisting the knife, of a yellow-white color, and apparently homogeneous.

The case was, and still is, a puzzle to me, and I mention it in the hope that some one more skilled in diagnostic lore may explain. The facts are as above stated; the explanation of them is another and a more difficult task.

ALBUQUERQUE, NEW MEXICO, March 23, 1884.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF WILLIAM GOODELL, M.D., PROFESSOR OF GYNÆCOLOGY.

Reported by WILLIAM H. MORRISON, M.D.

COCCYODYNIA.

GENTLEMEN,—The bad weather of this morning has kept our patients from arriving promptly, and I shall therefore occupy the early part of the hour with a few remarks on coccygodynia. This affection has another name,—coccygodynia,—and means pain in the coccyx. You will see a good many cases of this affection, and it is well to be posted in regard to it.

What are the symptoms of coccygodynia? They are pain in defecation, and pain in sitting down or rising up. In sitting down, women suffering from this disease will take hold of the back of the chair and sit down on one buttock, so as to avoid placing any weight on the coccyx. In rising up they do not rise directly, for in so doing a strain is thrown on the coccyx; but they catch the back of the chair with their hands, and lift themselves. I know of but one other disease that will produce this symptom, and that is rare. It is the formation of a little abscess in the coccygeal region, in which, after opening, will be found a small coil of hair. This sometimes gives a great deal of annoyance. There is another disease in which this symptom is simulated to a certain extent,—that is, fissure of the anus.

Another of the symptoms I have mentioned — *i.e.*, pain in defecation — may also be caused by fissure of the anus, or by an inflamed pile; but the patient will be likely to recognize a pile. In the majority of these cases it will be found that the nervous system is below par, or that there is nerve-prostration. In other cases the patients are healthy. To-day I wish especially to point out the differences between the real Simon-pure disease and the mimicry of the disease; and the latter is far more common than the former.

The cause of the real disease is some injury to the coccyx. This is a movable bone, and increases the anterior-posterior diameter of the inferior strait from four inches to four and a half inches. This bone may be ankylosed, or its ligaments shortened; and this, by the way, is one objection to a woman in advanced life

giving birth to a child. Under these circumstances, the coccyx may not be able to bear the strain put upon it, and there may be overstretching of the ligaments, or, in the case of ankylosis, a positive fracture of the bone. I have heard the coccyx snap more than once. Two of these instances were forceps cases. Another cause of injury to the coccyx is the bucking of a horse, in which the horse brings its four feet together and gives a jump, throwing its rider into the air, and in coming down the coccyx is often injured. I have seen several instances of this. I have seen a very bad example of this trouble in a lady otherwise in excellent health, produced by her chair being withdrawn as she was about sitting down, causing her to fall to the floor, striking the coccyx. The bone was fractured, and, as she would not consent to the radical operation, I was unable to give her any relief. Pure coccygodynia may be the result of dislocation, fracture, or of neuralgia.

The treatment of injuries to the coccyx occurring during labor should consist in keeping the patient at rest, the use of sufficient opium to relieve the pain, —and usually this is not great, there being only a sense of soreness,—and keeping the bowels bound for a week. In the two cases to which I have referred, union took place. In one of these I think that there was a fracture of the bone; in the other, the ligaments probably gave way. I have seen other cases in which the bone was not injured, but in which the ligaments were broken, causing the bone to be very movable, and occasioning the woman a great deal of discomfort.

When you get hold of a case of real Simon-pure coccygodynia, the treatment should, in the first place, be directed to lulling the pain in the nerves, for sometimes the nerves have been injured. An excellent remedy is five grains of iodoform by suppository at night. It is important to avoid the use of morphia as much as possible, for such patients are very liable to become morphia-eaters. When it can be done, it is better to give the remedy by the bowel. In fracture, it is better to give it by the mouth. Just here let me call attention to a mistake which is very commonly made. There is a wide-spread idea that the Latin noun *os*, a “mouth,” is of the masculine gender, and you will frequently see written “*per orem*” for “by

the mouth." *Os* is, in reality, a neuter noun of the third declension, and its accusative case is like the nominative, so that "by the mouth" should be written "*per os*," not "*per orem*." In fracture, then, you give the medicine *per os*, and keep the patient as quiet as possible, and sometimes you will be rewarded with a cure. The pain may sometimes be lulled by the use of injections of minute doses of carbolic acid around the coccyx.

If the worst comes, and it is impossible to relieve the pain by the measures mentioned, it will be necessary to extirpate the coccyx. I have done the operation but twice. I have, however, seen a number of cases in which it ought to have been done, but the patients would not consent. In your text-books you will find the following procedure recommended: introduce a tenotomy-knife under the skin, and pass it around the coccyx, severing all its attachments, thus giving rest to the bone and allowing an opportunity for repair. This operation is not an easy one to perform, and, as the results are disappointing, I should therefore advise you not to perform it.

The proper plan of treatment is extirpation of the coccyx. In performing this operation, an incision is made over the bone, passing down to its surface. All the muscular attachments are then severed, and, with the knife, the offending portion is disarticulated. If there has been a fracture of the bone, the portion left behind should be examined, and any roughness or irregularity removed. The woman on whom I operated two months ago suffered terribly from the pain. She also had an abscess, which, I am disposed to think, came from the irritation of the broken bone. I found an ununited fracture, and extirpated the broken portion of the bone. She was at once relieved of all her trouble. The other case was caused by a difficult labor, and had become bedridden from her sufferings. She was also cured. I think that after this operation it would be wise to insert a drainage-tube, so that if there is any discharge from the bone it will find a convenient way of escape.

Then there is the mimicry of the real disease; and this is much more common than real coccygodynia. This occurs in nervous, hysterical women. It appears in girls who are overworked at school, and in unmarried or married women who have

much care or trouble. It may arise from a positive injury. In hysterical cases, to use a homely expression, the nerves are "spiling" for an excuse to make trouble. A girl goes skating, falls on her knee, and may be laid up for years with an hysterical knee. In the same way, there may be an hysterical coccyx from a fall. The pains of the mimicry of the disease are very analogous to those of the real disease. They are not quite so severe; still, they are sufficiently marked to cause a great deal of suffering. It is not always easy to make the diagnosis between the real and the simulated. One who is accustomed to see these cases can almost make the diagnosis from the expression of the face. The woman who has the Simon-pure disease will have the evidences of suffering in her face, whereas the woman with the mimicry of the disease may tell you of the agonies she suffers with a smile on her countenance, or with what I call the hysterical mask. This is one of my ways of diagnosing these cases; but I was once very badly caught. I had under my care a very bright lady, an excellent metaphysician, and much interested in such studies. I mention this point as it has a bearing on the origin of the trouble. While riding a horse, it bucked, and ever afterwards she had pain in the coccyx. I was completely deluded. I concluded that here we had a sufficient cause, and that this was a case of the real disease. I examined her, and found a retroverted womb and prolapse of both ovaries. With a pessary, I was able to restore the womb and the ovaries to their proper position, and this effected considerable improvement in the pain in the coccyx. The pain, however, still continuing, I decided to extirpate the coccyx. The day and hour for the operation were appointed, and all the preparations were made, when suddenly, as if by magic, the pain disappeared. She had been in a receptive condition, the nerves were "spiling" for an excuse to make mischief, and the injury offered them the excuse. I speak in this way, because I cannot define these nervous fluids. We do not understand their action, and perhaps never shall.

When these cases come to you, do not be too anxious to cut away the coccyx. There is no objection to threatening it occasionally. Try all the general measures, and use local placebos for their impression on the mind, and also for their

positive local effect. Take it all in all, I like iodoform better than anything else. It should be administered by suppository, in doses of from three to five grains. Another excellent remedy is belladonna by suppository. Opium should be avoided. The general health should be improved. Put the patient to bed, have her rubbed, keep her friends from coming to see her, feed her as much as possible, giving large quantities of milk, using malt and iron, and, little by little, you will get the upper hand of the trouble. It is always well to begin the treatment with decided doses of bromide of potassium, which may at once cure the coccygodynia. If the pain is decidedly relieved by large doses of bromide, I feel very confident that it is of nervous origin. It is, I think, safer, at first, to look upon the affection as of nervous origin, rather than traumatic.

There is one point to which I neglected to refer, and that is, the way to detect an injury of the coccyx. The index-finger should be passed into the rectum, and the thumb over the coccyx. You must be careful not to be misled by the statements of the patient, for the mere insertion of the finger is a shock, and the woman at once complains before you have pressed the parts. Before manipulating the parts, ask if it gives pain; then pretend to move the bone, and see if any complaint is made, after which, get directly over the bone. In real coccygodynia, the slightest touch will give very great pain. This is almost as sensitive as a caruncle of the meatus urinarius.

One word in regard to preparations of iron. There are certain preparations which I think better for nerve-cases than others. Almost all nervous stomachs will bear the reduced iron, or iron by hydrogen. I often combine it with arsenic. In regard to strychnia, my experience is that in many of these nervous cases it cannot be given with profit in the early part of the treatment. The nerves are then too ready to resent anything which makes any impression on them. One-sixtieth of a grain will, under such circumstances, sometimes set the jaws. The muriated tincture of iron is an excellent preparation when it can be disguised. If the patient has a good set of teeth, I should not give it. It is liable not only to discolor, but also to do positive injury to, the teeth. It is, therefore, better, as a rule, to avoid the

use of the tincture of the chloride of iron. Blaud's pill, which consists of the dried sulphate of iron with bicarbonate of potassium, is often an excellent preparation. With reference to dialysed iron, I have met with some cases in which it did good, but in the majority it was of no benefit. I am disposed to attribute this to changes which occur in the preparation, and I have almost entirely given up its use.

In treating these cases of the simulated disease, the patients, as I have already said, must be well nourished. They should receive malt and large quantities of milk. They will grow fat, and, as they do so, the nerves will become more tractable. This is like other nerve-pains which women often complain of, and which may appear in the head, in the back, or even in the toes. I have seen a severe case in which it was located in the instep. All pains of this character are to be treated in much the same way.

NERVOUS AFFECTION OF THE BLADDER.

This is a patient whom I have not yet seen. She states that she has a pain in the womb and in the right side, going down to the knees. Let me think out loud. There is a pain in the right side, going down to the knees. What are the nerves? I know that there is one nerve which will do this, and that is the genito-crural nerve. There is probably something the matter with the right ovary, causing pressure and congestion.

Let us obtain the remainder of the history. She is a colored woman, 45 years of age, married, and has had seven children, the youngest of whom is five years of age. For the past four months she has lost very little at the menstrual periods. She has considerable yellow leucorrhœa. She has some difficulty in making water. She is unable to urinate in the morning, but has to wait until near noon, when she will make a "pretty smart" quantity. The water is slow in coming: she has to wait some time before it begins to pass. She does not have to get up at night to urinate. This difficulty might suggest the presence of a stone; but, if there were a calculus, why should she not be able to pass her water? A stone causes a constant desire to urinate, with the passage of only a small quantity of urine. This looks more like a nerve-symptom.

I shall now make a vaginal examination.

The first thing I find is a tear of the perineum almost down to the anus. I also find that a pessary has been used. The womb is in pretty good position. On its posterior surface I detect little roughnesses, which leads me to believe that there is the development of multiple fibroid tumors. There is a little tenderness over the left ovary, but I am unable to feel it. I cannot feel the right ovary, and neither is it so tender as the left one. The womb has probably been retroverted, and there has been a slight laceration of the cervix. There is not sufficient uterine trouble to explain the symptoms.

Let us next examine the perineum. The urethra bulges outward, and that is one reason probably why she has difficulty in making water. The urethra makes a sharp curve, interfering with the passage of urine, just as bending a rubber pipe will prevent the flow of water. In cases of this kind it is well to examine the bladder for stone. I make it a rule, in almost every case in which there are symptoms which suggest the possibility of stone in the bladder, to examine for vesical calculus, for in one case I was badly taken in by neglecting this point. The uterine sound is a pretty good instrument for this purpose, but not so good as the regular bladder-sound. I lift up the floor of the bladder with a finger in the vagina. As a woman has no prostate gland, it is easier to discover a stone in the female than it is in the male. I can find no stone. Stone in the bladder is much more rare in the female than it is in the male, and this is due to a variety of reasons. In the first place, the female urethra is very short and dilatable, so that if a stone forms in the kidney and is carried into the bladder it is usually expelled as soon as it arrives. In the next place, women are not exposed to the various vicissitudes of weather, as are men. In the third place, women, as a rule, do not lead such dissipated lives as men. Men frequently become intoxicated, and this is a predisposing cause for stone. Further, in limestone districts, it is the men working out in the sun who drink the larger quantity of water; and this may have some influence in determining the formation of stone.

You may live many years without coming across a stone in the female bladder, and then one may occur which, to your mortification, you may overlook. This is

probably a nervous bladder. It may have had its origin in a retroverted womb, the cervix pressing on the urethra and bladder, producing an impression which is kept up by the nerves. If any of you have ever been nervous, you know that you could not hold your water; and I am sure that a number of you will suffer in that way as the time for examination approaches. This nervousness does not usually affect the bowels. I knew a clergyman who had invariably to go to the water-closet before entering the pulpit to preach. I have known medical and other lecturers who had always to empty the bladder before entering the lecture-room. In regard to myself, it was a long time before I obtained control in that respect. As I have said, I am disposed to look on this as a nervous bladder.

I shall order the following mixture, which ought to have a good effect if our conclusion is correct:

R Ammonii chloridi, ℥ii;
Ammonii bromidi, ℥iv;
Infus. gentian. comp., f℥vi.—M.

Sig.—A tablespoonful three times a day.

She will take this before meals, if it does not irritate the stomach. If she cannot take it before meals, she may take it afterwards. If a tablespoonful makes her sleepy, the dose will be reduced to a desertspoonful. The bowels are regular. If there had been constipation, I should have added one grain of the resin of podophyllum to this mixture.

In cases of this kind we often have a real catarrh of the bladder, and then I usually order bicarbonate of sodium in large doses with belladonna. I should give twenty grains of bicarbonate of sodium three times a day. This may be administered in infusion of buchu or some other diuretic. The belladonna had better be given in a separate prescription, for with this drug you have to feel your way. Some patients can take the tincture in twenty-drop doses, while others cannot take five-drop doses. I have seen one-eighth of a grain of the extract so upset a lady that she was spitting cotton, seeing a variety of imps, and talking unmitigated nonsense. I have seen half a grain in two doses not only demoralize but unchristianize a very excellent clergyman. He talked such outrageous nonsense that, if he had been in his right mind, he would not have been allowed to remain in the

church. A dose of morphia and a little brandy restored him to his senses. In the other case a little brandy was all that was required. There are some remedies which I never prescribe in their official doses at first: tincture of cannabis indica is one, aconite is another, and a third is belladonna. I always begin with a small dose, and work upward as I find the patient stands it.

We shall have the patient report in one week, and we shall then be able to see what the effect of the treatment has been.

TRANSLATIONS.

ASPHYXIA FROM ANÆSTHETICS, AND ITS TREATMENT.—Dr. Benjamin Howard, of New York, has recently given several demonstrations in Paris and London of his method of treating asphyxia. He claims that the traction of the tongue, so universally employed, is not sufficient to produce an elevation of the epiglottis; for the anatomical conditions, under these circumstances, are opposed to the elevation of the epiglottis by this means. The only way in which elevation of the epiglottis is possible—and this is the principal feature of Dr. Howard's communication—is to *place the head and the neck in a condition of forced extension*. The result of this position is to remove the tongue from the pharynx, to augment the calibre of this tube, and to establish a free, commodious, and unobstructed way from the nose to the lungs. At the conclusion of the remarks made by invitation upon this subject at a hospital clinic, in Paris, M. Verneuil made some judicious observations upon the demonstration, recognizing the correctness of the facts claimed, and insisting upon the interest of the applications flowing from them.—*Le Progrès Médical*.

CYSTICERCUS IN THE BRAIN.—In the service of Charcot, at Salpêtrière, a soldier, 24 years of age, was admitted into the ward with headache of three weeks' duration. His illness began shortly after his return from Tunis a year before. He was subject to attacks of headache, vertigo, and vomiting. He had had one epileptiform convulsion. There was no paralysis; but he had vertiginous sensations, which made him stagger in walking. He was slightly deaf, had tinnitus and choked disk. Temperature normal. Vomiting and head-

ache persisted, delirium appeared, and he finally died with double pneumonia. At the autopsy a cysticercus was found in the fourth ventricle, and two others at the base of the brain. The former had caused an excess of fluid in the ventricles (hydrocephalus), and choked disk; the others had produced congestion of the membranes. No other evidences of the parasite were found in the body.—*Archives de Neurologie*, March.

A MODIFICATION OF THE METHOD FOR TOTAL EXTIRPATION OF THE UTERUS.—Prof. Müller, of Berne, has modified the method for the total extirpation of the uterus, in the following manner. During the operation the abdominal aorta is compressed, and the uterus turned out through an incision in the posterior wall of the vagina. After securing the broad ligaments and vaginal tissues with provisional ligatures, the uterus is then divided vertically with knife and scissors into a right and a left half, each of which is drawn down and the ligaments secured just as in the treatment of pedicle of uterine polypi, the uterine tissues divided about one centimetre from the ligature. The wound in Douglas's pouch is not closed, nor is drainage employed, the only dressings being dry carbolyzed gauze and daily washing with corrosive sublimate.

In the four cases in which the author employed this procedure the result was perfectly satisfactory, probably from the very slight loss of blood which this method entails.—*Deutsche Med. Zeitung*, May 12, 1884. S.

A DANGEROUS ADULTERATION OF IODOFORM.—Dr. Biel, of St. Petersburg, calls attention to a commercial adulteration of iodoform with picric acid, which cannot be detected by the tests of the Pharmacopœia. This mixture is not only poisonous, but is explosive when rubbed up in a mortar. It can be detected by the citron-yellow color it yields to a watery filtrate. If a solution of cyanide of potassium be added to the filtrate, no reaction will follow if iodoform be pure; but if there be a trace of picric acid present, the solution will in the course of ten minutes become brownish red (isopurpuric acid), and in a short time deposits an insoluble precipitate of isopurpurate of potassium.—*Deutsch.-Amerikan. Apotheker Zeitung*, p. 238.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 12, 1884.

EDITORIAL.

MEDICO-LEGAL NOTES.

A QUESTION of some interest to physicians comes up in the treatment of paupers, as to the source from which they are to receive pay for their services.

In a recent case in this State, a person was injured by an accident, and, being without means of support, he was shortly afterwards taken to the poor-house. A physician treated him before his removal to the poor-house, and subsequently, with the knowledge, but apparently without the direct request, of the county authorities. A bill was rendered to the county for the services, and payment was refused; whereupon a suit in a justice's court was entered, and a judgment was obtained. This judgment was, however, reversed on appeal, on the ground that a justice's court had no jurisdiction: the action should have been brought in a court of quarter sessions. The point as to the right to compensation from the county was not directly considered in the appeal, but no intimation was given that the first verdict was improper. The physician had chosen the wrong court to sue in, and a verdict rendered in such an action could not stand.

The courts are beginning to have a good deal of trouble over the oleomargarine manufacture, and the Legislatures are making the laws more and more strict. In Ohio the statute forbids the sale of any substance purporting to be butter or cheese, or having the semblance of butter or cheese, which substance is not made wholly from pure cream or pure milk, unless each package of such substance have distinctly and durably painted, stamped, or marked thereon the name of

each article used or entering into the composition of such substance.

A citizen of Ohio obtained a patent from the United States on some device for manufacturing a substitute for butter. In carrying out his patent he failed to mark, as every manufacturer of oleomargarine does, the ingredients going to make up his concoction. He was thereupon arrested and fined in a police court of Cleveland, and this action has recently been affirmed by the higher court. The interesting point was made on his behalf that, his device being patented, and protected by the United States, the Ohio authorities could not interfere and prevent his getting the full advantage of his patent. The court, however, held that while the State could not discriminate against his patent by allowing the sale of similar unpatented articles, yet it could, under the general police powers of the State, prevent the sale of all articles which were considered injurious and unhealthful.

One of the English courts of appeal has recently decided that a statute giving a board of health power to make by-laws to prevent the keeping of animals on premises where they will be injurious to health does not authorize such board to enact a by-law that pigs shall not be kept within fifty feet of a dwelling-house.

That prolific breeder of disease, sewer-gas, seems to be one of the hardest things to discover in a house by a superficial examination, and the cases are increasing where a tenant tries to escape payment of rent because of this defect. The law, however, sides with the landlord to the extent that he is under no obligation in the matter except where he makes representations that are false. If the landlord should say that the house was in good order, and there was sewer-gas in the house, the tenant must nevertheless pay rent if he examines the house. A recent case in a New York court establishes the rule, however, that if the tenant says he does not

care to examine the house, but will rely upon the landlord's statement that it is in good order, and sewer-gas is subsequently discovered, the house can be abandoned and rent cannot be collected.

THE INTERNATIONAL MEDICAL CONGRESS.

FROM the official rules and programme which have just been published by the Organizing Committee, it appears that the proceedings of the eighth session of the International Medical Congress, which convenes at Copenhagen, August 10, will be sufficiently varied and unusually valuable. The Congress will be divided into fourteen sections for the scientific work (meeting daily from 10 A.M. to 12, and from 1 to 3 P.M.), and will also meet in general session (from 4 to 5.30 P.M.). There will also be evening assemblies for social purposes and the delivery of some special addresses from 8.30 to 9.30 P.M.

The ordinary members of the Congress are simply required to be medical men legally qualified to practise in their respective countries, who shall subscribe their names upon the register of the Congress and take out their tickets of admission. Other scientific men interested in the work of the Congress can be inscribed as extraordinary members. The subscription has been fixed at twenty Danish crowns (or about twenty-two shillings threepence), and each member of the Congress will be entitled to a copy of the Transactions when published. The books will be open for registration on the 9th of August all day (from 9 A.M. to 5 P.M.), and for one hour on each of the succeeding mornings during the week of the session. In order to save trouble, it has been arranged that inscription can be obtained beforehand by remitting the subscription to the Secretary-General, Prof. C. Lange, together with the full name, title, and address of the applicant.

It is advised that arrangements for lodgings should be made in advance, as those who come late may find difficulty in finding them; the Reception Committee has named the 20th of July as the latest time to apply through the Secretary-General for assistance in obtaining accommodations.

In the very liberal programme which has been issued, in which there is promised a wealth of material, we notice the name of only one Philadelphian, Prof. J. Solis Cohen, who will read a prepared communication on the "Prognostic Significance of the Several Local Manifestations observed in Tuberculosis of the Larynx." Should the next Congress be held in this country, we predict that this city will be more largely—though perhaps not better—represented in the proceedings.

CRESSON SPRINGS AS A HEALTH-RESORT.

WE are in receipt of a letter announcing that Dr. Carl Seiler, of this city, is going to spend the present summer at Cresson, Pennsylvania, with a view to investigate further the therapeutic value of the mineral springs of the place in the treatment of catarrhal diseases of the mucous membranes. The results of his experiments with these waters which he carried on during the winter were given in a condensed form in a paper which he read before the American Medical Association at Washington, and he now intends to continue these investigations under the more favorable influences of the pure and invigorating mountain-air. The situation of the springs, at the summit of the Alleghany Mountains, at a height of two thousand three hundred feet above the level of the sea, and the moderately cool and dry climate, will, of course, greatly benefit patients, even if not using the medicinal waters; while the two combined cannot fail to become a powerful factor in the treatment of even those severe cases which

under other conditions would be intrac-table.

His views in regard to the proper management of patients at watering-places, as expressed in the paper above referred to, are certainly sound. We can heartily endorse his opinion that our American mineral springs are fully equal to some of the celebrated European spas, but that we cannot, in this country, expect to obtain the often marvellous results that are reported from the use of the celebrated German or French waters, so long as patients are allowed to use medicinal waters at their own discretion—or, rather, indiscretion—and to pay no attention to proper diet and exercise. We hope he will succeed in carrying out his intentions, and that, as the result of his studies, the reputation of Cresson Springs as a Pennsylvania health-resort may be increased, and its great natural advantages become more widely known.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE desire to succeed in life is regarded as at once natural and laudable. Probably when the pirate boats of our Norse ancestors showed themselves over the angry waves,—the white horses,—to the consternation of the British, their stay-at-home relatives admired their courage and determined to rival their exploits when they heard of them. The calm bravery inspired by religious fervor of the Pilgrim fathers doubtless drew others to the wilderness of New England; and the doings of the sea-dogs of Raleigh, facing death with a sort of exultation, were told with much approval and listened to with a sense of envy in their homes in Devonshire. The Anglo-Saxon always has been given to "getting on," as the aborigines of distant lands found out, so long as there were any of them left to realize the fact. So now, under less exciting conditions, the same problem of success in life is being solved. Unfortunately, it seems that success for one man often involves detriment or injury to the interests of others. John Doe's way of advancing himself is regarded by Richard Roe as calculated to prejudice his prospects; and then the said Richard Roe turns on John Doe and

rates him for acting unfairly. A lively correspondence has been going on in the *Medical Press and Circular* lately on the topic "What is a Medical Advertisement?" Perhaps you, on your side of the Atlantic, are not quite clear on the subject. The advantages which accrue from being able to make the world realize the fact that you are in existence have always been recognized by the worldly, and if a man can only come before the world money will sooner or later find its way into his purse; whether or not he can keep it there is not to the present purpose. One man tries to become known in one way, another man essays the task in a different way; and each is apt to think the other's way just a little unfair. If the guineas do not come in pretty equally, the man with the smaller income will probably charge the more successful man with not acting fairly. The first letter was by a reformer who signed himself "Anti-Humbug." He did not seek to place himself on a pinnacle of self-righteousness and from this height arraign his less lofty fellow-creatures; on the other hand, he said there were various ways of medical advertising, and that to him they seemed pretty much on a level. He spoke the words "with the bark on," thus: "At present, naught save the 'hollow ghost' of a difference exists between the advertisement which is considered legitimate and that which is unprofessional." He then enumerates some of the little ways which seem to him "tricks that are vain," such as "letters to newspapers on medical topics," which, of course, "drum" the writer pretty well; circulating pamphlets under a pharisaical cloak of philanthropy; the delivering of lectures on medical subjects to lay audiences; the insertion of advertisements of medical books in lay papers, and reviews of the same,—as a well-known medical tome was reviewed in the *Times* lately; certain advertisements in the *Lancet*, which, he states, is widely read in clubs and public libraries; the bulletins issued when any distinguished personage is indisposed. Even the humble enterprise of the general practitioner in putting in his surgery-window in large letters his hours of attendance and his modest charges he regards as an "advertisement." He candidly owns that he does not object to any of these schemes; but what he does want to know is, are not all of these ways of making a man known "advertisements"? This letter stirs up another man, who signs himself "Paracelsus," and who pursues the subject. According to him, "legitimate" advertising includes advertisements in medical papers; in the lists of hospitals, which, at least, go to the lay governors; in the lectures delivered before the Royal College of Physicians (chosen by no known rule); and in the bulletins issued when persons of high social position are ill, which carry on them the names of the attending medical men. Apropos of this last

game, which, of course, applies almost solely to the leading consultants, there was a small skirmish in the "Proceedings of Council of the British Medical Association" a few weeks ago. Eighteen leading consultants, medical and surgical, addressed a communication to the Council to the effect that "particulars respecting the sufferings of well-known sick men may possibly be admitted into other journals is no argument in favor of their appearing in a journal published by our Association, one object of which is to uphold the honor and dignity of the profession of medicine." The Council echoed the admirable sentiments of the signatories, but explained that the practice was of old standing, and acknowledged that if the colleges had discouraged such communications the evil would not have continued as it had done. Further, they tendered an explanation by the editor. Of the acumen of the said editor no two opinions exist, and he turned the tables on the signatories most successfully. He said, "The practice of the journal, during a long series of years, has been to communicate with the medical attendants in charge, and to issue the information which they have furnished avowedly for publication. The details in question have, for the most part, been furnished by eminent members of the medical profession, including, in numerous instances, some of the most distinguished of the signatories of the above document." He proceeded to suggest that "the principle regulating the limits within which such information should be supplied to the medical journals for publication should be indicated broadly by the colleges for the guidance of their Fellows." He comforts the signatories that he "concurs in the opinion that the practice in question has of late years grown to an extent which might fairly be considered an abuse," and points to some suggestions made by the journal to correct the said abuse in a previous number. The signatories were pretty well "hoist with their own petard," and the editor scored on the transaction as a whole. From what has been said in this squabble, it would appear that this form of advertising is restricted mainly to "eminent members of the profession," including "some of the most distinguished of the signatories" of the charge. This example of advertising, of course, excites the envy of those to whom it is unavailable. Then "Paracelsus" calls "illegitimate" advertising inserting advertisements of medical books in lay papers. And again it seems that the leaders of the profession are the chief of the sinners, for he says, "the works of men eminent in the Royal College of Physicians figure conspicuously in the impropriety." How ever is it that the venerable old institution in Pall Mall is growing so immoral in her old age? He goes on to ask, "Is publishing a book on a special subject, into which sufferers from the maladies there discussed

will peep if so minded, any worse for the interests of the patient than the medical readers of that book taking the said sufferers, not to the men best known in connection with their malady, but to some private friend, because it suits them to do so?—perhaps to one of those consultants who systematically give catch-penny dinners to the general practitioners who, in turn, 'give' them their consultations?" This is touching a very tender matter, and hard words may easily be bandied about on either side. He then points out that in teaching institutions the staff hunt as a pack, and, once admitted into the pack, a member thereof is carried on by his colleagues. That such aggregations of medical men should denounce the practices of others (unnecessary in their own case) is natural enough. He, too, recommends the tearing up of the "unwritten laws" of the College as the best thing to be done—under the circumstances. Then another correspondent points to an announcement which appeared in the morning daily papers recently, that a certain surgeon with a handle to his name was going to perform an operation,—viz., the removal of a splinter from the cheek of Baker Pasha, received in the recent turmoil with the Soudanese. He wants to know who supplied the information to the papers. Once more it is "the heads" of the colleges which the said colleges are recommended to look after specially. Then another sends in a contribution to this "burning question." He thinks the discussion "refreshing," and suggests that two medical registers ought to be kept by the General Medical Council, "one of those practitioners whose first regard is for their profession, and the other of those whose chief care is No. 1." And he again falls foul of the Royal College of Physicians, as lacking in its duty to the profession, and asks it to explain the real status of the Fellows *inside* and *outside* its walls, and speaks of "the invertebrate judges who quail before the powerful and castigate the weak and feeble." There has been a good deal of strong language used up in this discussion, whatever the facts may be. Certain it is that the matter of medical advertising must come, as the last writer says, either to no rules at all or else to some definite rules and that the colleges see that these rules are kept.

It may now be well, in illustration of the controversy, to see what is the position of the two colleges at the present time. To follow what appears in the *British Medical Journal*, the Council of the Royal College of Surgeons is in conflict with its Fellows and members, "who justly demand a larger share in the management of their college." At a meeting of the Fellows and members, certain resolutions were passed and sent up to the Council, which resolutions were promptly rejected. However, the matter has been taken up in earnest by one branch of the British Medical

Association, which, we are told, "is the first shot fired in the campaign," and the members are invited to "support the Fellows in their crusade against the monopoly of power by the Council." These ruling oligarchies are falling upon evil days, clearly. Then, as to the Council of the Royal College of Physicians, what have they been doing of late? For a long time great dissatisfaction has been expressed about the way in which they select Fellows from the members, with all the advantages of lectures and examinerships which the Fellowship carries with it. In a recent discussion it was pointed out that of the last thirty-nine men elected only nine could be said in any way to have won their spurs, while the rest were practically unknown. But what has been the last freak of the Council in a matter where discretion might fairly be demanded? An extraordinary meeting of the Fellows was held on May 29. After some business was transacted, "the next business was the election of new Fellows. Considerable dissatisfaction, however, was evinced by the majority of those present with the list of names submitted by the Council. Dr. Andrew moved and Dr. Sieveking seconded a motion referring the list back to the Council for reconsideration, with full power either to omit names or to insert fresh ones, with the proviso that the total number should not exceed twelve. An animated discussion followed, but finally the motion was carried by a large majority."

What does this mean, in plain English? It means that the scandal of the selection of new Fellows has become so odoriferous that the body of Fellows, "by a large majority," have declined to endorse the list submitted to them by their Council; that the disgrace of the selection has got at last beyond their power of toleration. This is a state of affairs which seems amply to justify the hard words launched at the Council by the various correspondents.

We see, then, at both colleges the Councils ranged in open conflict with their Fellows and members. This condition of matters is disgraceful; indeed, disgraceful is scarcely the word for it; rather the word shameless should be used. What evil spirit prompts the ruling oligarchies in each case to take an attitude so offensive—offensive in every sense of the word—it is not for an outsider to speculate. Talk of a "house divided against itself," but medicine is riven in twain here, both in surgery and in medicine. What can the outside world have to say about the medical profession when such scandals are rife among us? Talk of example being stronger than precept; what precept, what "unwritten laws," could stand against such examples of arbitrary wilfulness? Whether the men who form the Councils of the colleges are borne up by a consciousness of rectitude, or are sustained by a conviction that they are sufficiently firm in the saddle to defy criticism and to believe

that wrong will prosper,—a blasphemous denial that God governs his own world,—it is not for me to say. But surely it must be one or the other. For long the sittings of the College of Physicians were held *in camera*. Now that a ray of light penetrates their mysteries, the spectacle is not an edifying one. As long as darkness shrouded their doings, the outside world saw only results, and not processes. Now it gets a glimmering of processes, and what it sees is not inspiring. How it is that such rule obtains in both colleges, and that in each alike the ruling oligarchy is at daggers drawn with its constituents, is one of those mysteries which the future historian may perhaps be able to explain: it is inscrutable to the contemporary chronicler. Whether it is creditable to the medical profession or not is a matter on which no two opinions can possibly exist.

From such an unedifying spectacle as that just described it is pleasant and "refreshing" to turn to something on which the eye can dwell not only without being offended, but with positive delight. Among the valuable new manuals for students of medicine issued by Cassell & Co., one of the best is that just given to the public on "*Materia Medica and Therapeutics*" by Dr. Mitchell Bruce. Dr. Bruce has long been looked upon with favor by all as a rising physician, and as a man with a good book in him if it could only be safely extracted from him. Mr. Malcolm Morris is a most skilful obstetrician in difficult literary parturition, and both author and operator are to be congratulated on the result in this case. The importance of the book is not to be measured by comparing it with the works of Ringer, Wood, and Bartholow, all of which are without and beyond the intellectual range of the ordinary student, but by contrasting it with the ordinary student's book, Garrod's "*Materia Medica*." That this was an excellent book in its early days, at the time when the writer was a student, is readily admitted. But the progress of therapeutics, whether by clinical observation or by experimental research, of the last twenty years has marched on unheeded by it. Without positively exhibiting its nakedness, what it lacks may be suggested by referring to what can be found in Bruce's little book. Here may be found an account of the utility of digitalis when the heart is inefficiently pumping the blood from the full veins into the flaccid arteries; of the effects of strychnine upon the respiratory centre when the respiration is embarrassed; of the good which will accrue from the administration of belladonna when profuse night-sweats are lowering the enfeebled patient into the grave. Here we find a reference to the action of potash as a muscle-poison, and cautions as to this action and how it can be met in practice when the heart-muscle is weak in cardiac dropsy. As to iron and its effects upon the digestive

organs, he tells how it should never be given until the digestive organs are working well, and then it is well to begin with the lighter preparations, and even to give them only after meals. He states that "narcotics are powerful depressants of the respiratory centre," often checking "useful cough" and lowering the breathing, and so ultimately aggravating the condition they temporarily relieve. "Pain and the other forms of distress in connection with this [respiratory] system are easily arrested by direct respiratory sedatives, such as opium, but not without considerable risk. The greatest discrimination must therefore be exercised in having recourse to these remedies, and the routine use of them is to be deprecated," he writes, in words brief but instructive. The utility of a mercurial pill followed by laxative salines when the liver is loaded with uric acid and bile-acids is laid down by one who has had special opportunities of watching the practice of Dr. Richard Quain,—one of the best practitioners who ever lived, or ever will live,—to whom the book is appropriately dedicated.

The necessity for such a book as this just brought out by Dr. Mitchell Bruce may not be so crying with you as with us. But, speaking for myself, I think Bruce's book a boon for the medical students of to-day, especially when they enter upon practice, and still more to those patients who may intrust themselves and their families to these young practitioners. How far such readers themselves may think with me, it is impossible to say. Possibly a few years of practice alone may enable them to estimate its value aright.

J. MILNER FOTHERGILL.

P.S.—If any reader should think my strictures in the above letter too severe, he will find my views expressed in two leaders of the *British Medical Journal* of June 7, one on "The College of Physicians," the other on "Medical Self-Respect."

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

SPECIAL MEETING, JUNE 6, 1884.

The VICE-PRESIDENT, B. F. BAER, M.D., in the chair.

DR. WILLIAM GOODELL exhibited specimens of

PYO-SALPINX, AND HYDRO-SALPINX.

In the former case the lady was single, and had suffered from pelvic pains and menorrhagia for several years. Last autumn a tumor was discovered by her physician, who deemed it a fibroid of the womb. Early this year her sufferings became so great that she

took to her bed. Very large doses of morphia were needed, and septic symptoms now set in. After she had been in bed for several weeks, Dr. Goodell was called in to see her. The tenderness of the abdomen was now so great that the examination was made under ether. Even then the diagnosis was obscure, because she flinched and her recti muscles became tense whenever the abdominal wall was pressed upon. A cyst was discovered, but of what nature it was impossible to determine. Dr. Goodell operated on her at his private hospital. The womb was studded with small fibroid nodules; posteriorly it had an outgrowth as large as a small egg. Closely adherent to the womb, to the pelvic fascia, and to the intestines was a thick-walled cyst of the left ovary, as large as the largest orange. The corresponding oviduct was very thick and enlarged to the size of a small sausage. It and the cyst were filled with a very dark purulent fluid, although there was no communication between them. The lower end of the cyst had become necrosed, and was so thinned out that it would very soon have given way at that point. On account of the presence of fibroids in the womb, the right ovary was also removed. Attached to the fimbriæ of the oviduct were three very beautiful pedunculated vesicles, while two others, not yet pedunculated, lay in the stroma of the broad ligament. The recovery of the lady was uninterrupted.

In the case of hydro-salpinx the patient was a widow, aged 37, who had been sent to him in order to have her ovaries removed. Severe pains began a week before the menstrual flux, culminating during the flow and continuing one week longer, then fading gradually away. For three weeks out of every month she was confined more or less to the recumbent posture, and wholly so during the menstrual week. A tear of the cervix and one of the perineum had been well repaired by two surgeons, but with no improvement. Dr. Goodell wished her at first to try the rest treatment, with massage, electricity, and graded muscular movements, for he had repeatedly cured cases of this kind through such a mode of treatment. She was, however, too poor to take this treatment privately, and therefore was urgent to have her ovaries removed. The operation was performed fifteen days ago, and she is now doing very well indeed. The ovaries as exhibited were much enlarged, and showed marked follicular degeneration. From this condition Dr. Goodell thought that nothing short of the operation would have cured her. Attached to one oviduct was a delicate vesicle, with a thread-like stem of over an inch in length. In view of the frequency with which they are found, he could not but think that these vesicles played some rôle in the economy, and that they had sometimes a pathological bearing. He had on several occa-

sions met with small post-uterine cysts which burst either spontaneously or under the pressure of an ordinary vaginal examination. Taking advantage of this fact, he had quite recently burst one designedly by bi-manual pressure. Such delicate cysts, and also those very movable ones which remained small without increase in bulk, he was disposed to attribute to these vesicles. After bursting, these cysts sometimes refill. One he had known to burst and refill at least six times before it disappeared. Now, small ovarian cysts had, in his experience, thick walls, and, further, they rarely remain small any length of time. Dermoid cysts, on the other hand, often remain stationary for years, but they were generally not very movable, and they also had thick walls.

Dr. ALBERT H. SMITH had found these cases of pyo-salpinx very difficult of diagnosis. He had been present at an operation by Knowsley Thornton upon a case in which the lesion was double and both tubes and ovaries were removed. Rupture had occurred previously and had been followed by peritonitis. The patient recovered.

Dr. B. F. BAER inquired if Dr. Goodell would recommend rupture of cysts arising from the hydatids of Morgagni.

Dr. GOODELL would consider it good surgery for the purpose of preventing the further growth of the cyst. He had always found the fluid in small cysts to be unirritating.

Dr. ALBERT H. SMITH remarked that Schroeder holds that the fluid of an ovarian cyst is not noxious to the peritoneum. He makes no effort to protect the peritoneal cavity from its ingress during an operation, and yet his statistics show a remarkable success.

In response to a question by Dr. C. Meigs Wilson, Dr. GOODELL stated that the dressing of the wound after the operation was glycerole of carbolic acid, with the Lister gauze.

Dr. GOODELL also gave the following history of a

CASE OF HYSTERECTOMY.

The woman was single, aged 47. Her monthly fluxes began to be free in 1867. A year ago they became so exhausting that she could not pursue her trade as a seamstress. On April 30 she consulted Dr. Goodell, who found the whole abdomen filled with multiple fibroids of the womb. The cervix had disappeared, and the os uteri lay so high up that it was not possible to introduce the sound. The operation was performed at the Hospital of the University of Pennsylvania on May 22, on the same day with the preceding case. One outgrowth, as large as the two fists, contained a cavity filled with cheesy matter, and was so adherent to the abdominal wall and intestines as to need the knife for its release. It was possibly the right ovary, but he was

by no means certain. Koeberle's wire clamp was passed around what corresponded with the neck of the womb, but it was as large as his arm above the elbow. The woman's recovery thus far has been uninterrupted. The temperature reached 100° but once. The clamp fell off on the sixteenth day, leaving a very deep funnel-shaped pit. He had intended to exhibit the specimen, but it was too bulky to carry and also had become quite offensive. In this case, had he been able to reach the ovaries or to discover them, he would have removed them in preference to performing hysterectomy; but the firm adhesions prevented the rotation or the lifting up of the tumor, hence the ovaries were inaccessible. Sometimes, even when the uterine fibroid can be lifted out of the wound and the ovaries reached, these organs are so embedded in the fibroid, or so drawn out in ribbon-form on the surface of the tumor, as to make their complete removal impossible. When, however, the ovaries can be removed with safety, the operation is a most promising one, as he could attest from several very successful cases.

Dr. W. T. TAYLOR reported the following case of

PARTIAL PLACENTA PRÆVIA.

Mrs. S., an Englishwoman, aged 46 years, the mother of ten children, came to see him in December, 1883, in consequence of abdominal pains, headache, and vertigo, with a suppression of her menses, which she attributed to a "change of life," as she had been irregular for a year past. She also had numbness with tingling in the hands and feet, and had not been so affected in any former pregnancy. Consequently, she would not believe in her condition until some weeks later, when she quickened. In the month of February last she had enlargement of the veins of the legs, with œdema of the feet and ankles, for which she took occasional doses of potassium bromide, with a solution of cream of tartar (℥j to a pint of water) to be taken freely. By this treatment she was temporarily relieved.

On March 27 she had abdominal pains and a profuse hemorrhage, which saturated her clothing and greatly alarmed her. On examination, Dr. Taylor found the os uteri high up and slightly open. Although the hemorrhage diminished, yet the pains would recur at intervals, and he fully expected labor would soon begin. Under the use of equal parts of wine of ergot and solution of sulphate of morphia, she began to get easier, and in a few days was out of bed and able to resume her household duties, feeling more comfortable, as the enlarged veins were smaller, her feet and ankles had diminished in size, and the headache gone entirely. He told her that nature had come to her relief, and bled her without his ordering it.

Feeling satisfied that this was a case of

placenta prævia and that there was no immediate danger, he concluded the most prudent course was to let nature alone and wait until labor began. She had no more trouble until May 10, when she passed a large clot of blood and complained of slight pains in the abdomen; these occurred occasionally for two days, when the membranes ruptured and a sudden gush of water followed by a flow of blood indicated that labor had begun. On examination, he discovered within the os a spongy, ragged, bleeding mass of tissue, which was recognized as the placenta; with each pain the flow of blood increased as the cervix dilated. Sweeping his index finger around within the mouth of the womb as far as he could reach, to detach the placenta from the uterine walls and assist the first stage of labor, he felt the foetal head beyond.

To arrest the bleeding, which, if it continued, would exhaust the mother and destroy the child, he plugged the vagina completely with strips of old muslin well saturated with lard, and waited patiently for the os to dilate and the head to advance, giving at the same time occasional doses of quinine and wine of ergot, as a tonic and stimulant. In about an hour the advancing head had expelled a part of the tampon, and, on removing the remainder, he found that the bleeding had ceased and the vertex was presenting in the left occipito-posterior position. Auscultation revealed a feeble foetal circulation; but, as the pelvis was roomy and the patient somewhat exhausted, he gave her freely of milk-punch until her pulse became stronger, which it did in half an hour, when, as the head had ceased to advance, he applied the forceps and delivered her of a medium-sized girl, which in a few minutes began to cry with some vigor, contrary to expectations, for he had told them it would probably be dead. Its vitality had been preserved by the adhering part of the placenta, which then came away quite easily. A teaspoonful of fluid extract of ergot contracted the womb firmly. The patient was weak for several days, but, under the use of tonics, with nourishing food, she soon recovered her usual strength.

Dr. A. H. SMITH remarked that this case, being partial and without profuse hemorrhage, could have been best carried through by rupturing the membranes and bringing down the head, which would have stopped the hemorrhage as soon as it engaged in the superior strait. Dr. Smith asked the question, Under what circumstances are we warranted in interfering? If the hemorrhage be alarming and the patient exhausted, she is in a poor condition to bear interference; and, on the other hand, we have no right to interfere if there be no pain or hemorrhage. To interfere by manipulation is very dangerous, unless the uterine contractions are rapid and effective after labor once begins. The position of the child should be carefully and ac-

curately determined by external manipulation before interference becomes necessary, so as to know where to seek the feet if turning becomes imperative. When the placenta prævia is complete, dilatation of the os causes a terrific hemorrhage, the blood streams from the patient like water from a hydrant or a small fire-plug, and death comes very quickly. Only perfect knowledge of the condition of things and the position of the child will enable the physician to avert the doom. Now, as to the tampon. He would not use it. It hides the hemorrhage which may be going on profusely behind it, as was so vividly described by Dr. Goodell in his paper on "Concealed Accidental Hemorrhage of the Gravid Uterus" in vol. ii. of the *American Journal of Obstetrics*, in which he showed that the woman might bleed to death without one drop of blood escaping externally. The tampon conceals the hemorrhage without necessarily preventing it, and, while it remains in place, one hand of the physician should be constantly on the patient's pulse, to note instantly any failure of the heart, while the other should be on her abdomen, to note any changes in size of the uterus or position of the foetus. In Dr. Taylor's case the treatment was beyond criticism, because the result has been happy.

Dr. GOODELL agreed with Dr. Smith that placenta prævia is the most formidable complication in obstetrics. No general rule can be made applicable to the treatment of all cases. In partial ones the membranes should be ruptured and the head brought down. It must always be borne in mind that in these cases the implantation of the placenta has caused increased vascularity and thickness of the cervical walls: they are easily ruptured, and, if torn, bleed profusely. There is greater danger of septicæmia from absorption of decomposing lochial discharges when passing over this surface if it be torn. He well remembered one case which he attended years ago in consultation with Dr. Augustin Fish, since deceased, in which, in consequence of what he now considers undue haste, lacerations of the cervix occurred, and, although the labor terminated happily, septicæmia set in a few days later and resulted fatally. It would have been better in that case to tampon. When the placenta is not central there is very little danger; there is some. The tampon may be used, but the pulse must be constantly watched, and frequent abdominal palpation should be made. He had been struck with the method practised by Dr. Ellwood Wilson more than twenty years ago. It consisted in gentle digital dilatation of the os, introducing first one finger, then two, and so on; as soon as sufficient space was obtained, he gave ergot, made podalic version, and delivered. Very few practitioners advise that method. Dr. Goodell had not met with many cases, and the one



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spoken of above was the only fatal one. He has used Barnes's dilators, taxis, strength, and courage, and has tried to adapt his treatment to the indications of each particular case.

Dr. W. H. PARISH thought the tampon was not used as frequently now as it was a few years ago, either in the form of Barnes's dilators or of the vaginal plugs. Under similar circumstances, he would probably do as Dr. Taylor did. Partial placenta prævia is not very dangerous; but in complete, the hemorrhage is excessive. In one case he had tamponed for several hours, when, the os being dilated, he etherized, and rapidly delivered a living child. The mother was in imminent danger of death from hemorrhage. The abdominal aorta was compressed, and ice was used to the cervix, but without success. The hemorrhage was controlled by the application of a cloth wet with Monsel's solution to the denuded cervical and uterine surface.

Dr. TAYLOR had used the tampon in several cases of partial placenta prævia and in numerous cases of abortion, and had never yet had bleeding to go on behind it. The line of treatment practised in this case had always proved satisfactory as regards results.

Dr. GOODELL remarked that the womb at term was large, and concealed hemorrhage might be free enough to cause death, but that there was no such danger in an abortion at two or three months.

W. H. H. GITHENS,
Secretary.

NEW YORK PATHOLOGICAL SOCIETY.

STATED MEETING, JUNE 11, 1884.

R. W. AMIDON, M.D., Chairman *pro tem*.

FIBROUS TUMOR OF THE BREAST—TUMOR OF THE PENIS—LIPOMA OF THE SHOULDER.

Dr. WACKENHAGEN presented three specimens, from different patients, which he referred to the Microscopical Committee. The tumor of the breast, which weighed nine ounces, began to develop twenty-five years ago as a small lump, and during the last two years had become painful. A tumor weighing two ounces was removed from the axilla. An imperfect examination pointed to a fibrous growth. The wound had entirely healed under bichloride and iodoform dressing by the eleventh day.

TUBERCULAR PERITONITIS IN A CHILD.

Dr. NORTHRUP presented the intestines of a child which died at the fourth year of age, of tubercular peritonitis. It had been out, attended by a nurse, and was reported as in good condition, but was brought to the New York Foundling Asylum in February with ascites. While in the hospital, the fluid in the abdominal cavity became more or less boggy, and finally ceased to change position when the child was turned from side to side.

There were no other symptoms, except those of bronchitis and occasional attacks of constipation. Death took place from exhaustion. At the autopsy, when the abdomen was opened, the parietes were found to be closely adherent to the mass within. The liver, spleen, stomach, and large and small intestines, constituting one mass, were glued together by a gelatinous-looking substance. The liver, spleen, and kidneys contained a few miliary tubercles. In the lungs the tubercles were scattered throughout, and there was diffuse pneumonia and œdema. The brain was not examined. One ureter was much dilated, due, probably, to a constriction arising from adhesion. Ulcers in the intestine had perforated the gut. The peritoneum contained throughout its connections large round tubercles. Dr. Northrup remarked that this was the only case of the kind which he had seen in a child, although he had made examinations in the case of over two hundred children who had died of tuberculosis. He believed that death from tubercular peritonitis was not very uncommon in the adult, however.

Dr. PEABODY said he had not seen such a case in a child. He thought it was not very uncommon in the adult.

Dr. PETERS had seen tubercular peritonitis in two children in the same family, one being between 2 and 3 and the other between 4 and 5 years of age. There were first only symptoms referable to the bladder, and afterwards to the brain. In these cases, also, the tubercles were not limited to the peritoneum, but were found in the liver, spleen, and kidneys as well. The brain was not examined. There was no family history of tubercle.

Dr. FERGUSON, some time ago, made an autopsy in a case in which the physicians had made a diagnosis of an ovarian tumor, there being an abdominal tumor, and he found, on opening the abdomen, that there had been a perforation of the intestine, as in Dr. Northrup's case, and the escaped contents became limited by inflammatory substance and presented the appearance of a tumor.

TUBERCULAR MENINGITIS IN A CHILD.

Dr. KNIGHT presented a part of the brain of a child which died of tubercular meningitis at 1 year of age. The case was somewhat interesting, on account of a family history of syphilis leading to the suspicion of syphilitic meningitis. The child had been sick about five days when Dr. Knight was called. On the sixth day the patient was apparently unconscious, the head rolling from side to side, occasional muscular twitchings, the pulse regular, the temperature not elevated, or but slightly so. No nourishment was taken. The second day after he saw her, she was lying on the left side, apparently asleep, the left arm and leg being drawn up and down constantly. The right side was motionless. The movement of the left arm and leg con-

tinued day and night. There was some movement of the jaw at his visit on the third day. There were occasional twitchings of the lids on the sixth day, and the eyeballs were constantly moving. The left arm now became rigid. There was a violent spasm of the right side on the seventh day, and three hours later the child died. The temperature did not go above 101° F. At the autopsy, tubercles and a translucent membrane covered a considerable portion of the base of the brain. The father had contracted syphilis about five and a half years before the birth of the child, and about a year later the mother became infected. During the first year of the mother's infection a child was born which presented the signs of syphilis. The child from whom the specimen was presented was born during the fifth year of the mother's infection. It had no lesions at birth, nor afterwards. Dr. Amidon, who made the microscopical examination, had at first supposed there was syphilitic lesion, but it proved to be apparently purely tubercular.

Dr. AMIDON remarked that in certain cases, as in the present one, we find the gross lesions appear more like those of syphilis than of tuberculosis, while the microscopical examination discredits the theory of syphilis.

Dr. NORTHRUP thought the symptoms pointed pretty clearly to tubercular meningitis.

Dr. PEABODY said a woman was admitted to New York Hospital suffering from symptoms of meningitis, from which she died. At the autopsy he found a condition of things very similar to that which Dr. Knight had described as covering a part of the base of the brain and extending down on the anterior surface of the spinal cord,—a thick, gelatinous-looking substance, from an eighth to a sixteenth of an inch in thickness, quite clear, and containing no tubercles. There was perivascularitis, and, in some places, endarteritis obliterans, which led him to believe it was syphilitic. There were no tubercles any place. Possibly in Dr. Knight's case there was both tuberculosis and syphilis.

Dr. NORTHRUP thought that, as a rule, in well-developed tubercular meningitis there was a gelatinous layer at the base of the brain, which was apt to be of a greenish color.

Dr. VAN GIESON thought twelve days rather a short course for tubercular meningitis. Cases in which there was a large amount of congestion were more likely to be attended by the gelatinoid effusion. With regard to whether or not syphilis may have been an etiological factor in Dr. Knight's case, he thought that in children dying from a syphilitic lesion of the brain there were almost always previous skin-lesions. The low temperature in this case was not extraordinary. He had attended a case of tubercular meningitis which terminated in death, the temperature at no time going above 100° F., although

it was taken frequently and with different reliable thermometers. He replied to a question by Dr. Amidon that if there should be a sudden rise of temperature it was likely to be pre-agonistic. This, however, by no means always occurred. The symptoms presented in the case narrated by Dr. Knight were not unusual.

Dr. AMIDON thought there was always a pre-agonistic rise of temperature in tubercular meningitis. He then presented microscopical specimens illustrative of the disease as it occurred in a child 5½ years old. There was a strong family history of tuberculosis. The child had always been well, but was sensitive to cold. Three weeks before the fatal illness it began to cut its back teeth, and was very irritable, and then began to act in a manner pointing to meningitis,—not wishing to be disturbed, preferring a darkened room, irritable. At seven o'clock of the morning of the last day of life the patient was, for the first time, seized with general convulsion. It had been sleeping well during the night, and awoke conscious. It lost consciousness, the eyes remained open and fixed, and it lay bathed in a warm perspiration, the temperature being 105°. Death took place at noon. At the autopsy the base of the brain was found studded with miliary tubercles. The other viscera were not examined.

Dr. PETERS remarked that he had found the primary symptoms of meningitis more variable than in almost any other disease. Supposing it might first invade any one of the nerves at the base of the brain, it might give rise to corresponding symptoms. He knew of no affection in which it was more difficult to make a definite diagnosis during the first four or five days than in tubercular meningitis.

Dr. AMIDON regarded the preceding stage of irritability, inability or disinclination to walk and be disturbed, and desire to rest quietly in a dark room, as almost pathognomonic of the onset of the disease.

Dr. J. LEWIS SMITH, who had just arrived, being asked his experience as to the course of the temperature in these cases, said it had, in his practice, varied in height according to the extent of the meningeal inflammation. If the amount of inflammation excited by the tubercle were moderate, the febrile movement would be mild. He had been interested in Dr. Peters's remark as to the difficulty of making a diagnosis early in the course of the disease. He had frequently been called to see cases in which the physician had previously diagnosed remittent fever.

ANEURISM OF THE INTRA-VENTRICULAR SEPTUM—ANOMALY OF THE LIVER.

Dr. FERGUSON presented the liver and heart of a boy who died at the fourteenth year of age, having for two months before admission to the hospital complained of shortness of breath,

weakness, and loss of appetite. On admission, he was fairly nourished. The face looked puffy, he was anæmic and cachectic, and suffered from dyspnoea, the breathing being principally diaphragmatic. The pericardial area was increased, and a harsh cardiac murmur was present. He died quietly two days after admission. The cavities of the heart were dilated. One of the aortic cusps was nearly destroyed, and just above it was a small, smooth opening in the aortic wall, which communicated with the intra-ventricular septum, leading to an aneurismal sac about half an inch in diameter. Above the opening into this sac was extensive ulceration of the aortic wall. The left lobe of the liver was only rudimentary; the right was roundish in form, and on its surface were a few small nodules. The gall-bladder was divided by a septum into two lobes. This was the first time that Dr. Ferguson had seen this anomaly.

FIBROUS AND FATTY DEGENERATION OF THE HEART-WALLS.

Dr. PEABODY presented the heart removed from a German woman, 56 years old, who died in the New York Hospital after having been under observation for about two weeks. The history was quite meagre. She was the mother of seven children; had been in comparatively good health until four months before admission. Twelve years ago she had suffered from cardiac palpitation. On admission, she suffered from dyspnoea. There was œdema of the lower extremity, of the lower half of the abdominal walls, and there was also marked ascites. When she first entered, she passed more urine than normal, but the amount gradually diminished to twelve ounces, and even lower. It contained albumen and hyaline and granular casts. The specific gravity was in general low. The liver was dislocated downward, and gave rise to difficulty in diagnosis.

At the autopsy the kidneys were found to be the seat of parenchymatous and interstitial nephritis. The heart was both dilated and hypertrophied. The valves were normal. The point of greatest interest was the presence of a large amount of fibrous tissue in the walls of the left ventricle, especially at its apex, where the walls were very thin. The microscopical examination showed in the immediate neighborhood of the white fibrous tissue fatty degeneration of the muscular walls, while just beyond the walls were normal. The endocardium was everywhere thickened. There was an abundant atheromatous deposit in the aorta, surrounding the coronary arteries, and in the mitral valve. The valves were competent. There was slight degree of cirrhosis, and marked evidence of tight lacing. The peritoneal cavity contained twenty-five hundred cubic centimetres of fluid. Dr. Peabody said that, clinically, this form of cardiac hypertrophy with-

out valvular lesion gave the patient greater distress than any other. Here there was no valvular lesion, no murmur, no apparent interference with the function of the heart; but there was marked hypertrophy of the ventricular wall, which subsequently gave place to dilatation. In reply to a question by Dr. Van Gieson, whether angina pectoris was present, Dr. Peabody said it was not; but he presumed that was to be accounted for by the fact that the occlusion of the coronary arteries had not yet reached a sufficient degree. He thought that any condition causing their occlusion might give rise to the symptom.

Dr. PETERS referred to two cases in which patients suffering from angina pectoris died suddenly, and obstruction of the coronary artery was found.

REVIEWS AND BOOK NOTICES.

VOICE, SONG, AND SPEECH: A PRACTICAL GUIDE FOR SINGERS AND SPEAKERS. By LENNOX BROWNE, F.R.C.S. Ed., and EMILE BEHNKE. 322 pp., 40 illustrations. Published by G. P. Putnam's Sons, New York, 1884.

This volume was conjointly written by the well-known laryngologist Dr. Lennox Browne and Mr. Emile Behnke, a successful teacher of vocal music, and embodies the experience of these two well-trained observers. They had come to the conclusion that the wrong use or abuse of the voice was the chief cause, in most instances, of voice-failure, and that the scarcity of fine voices was due less to dearth of material than to faults in its cultivation and exercise; and as a result of the recognizance of these facts we have before us this volume.

The first chapter, which forms an introduction, is headed "A Plea for Vocal Physiology," and in it are set forth in a masterly manner the reasons why every singer and teacher of vocal culture should be well versed in the physiological laws governing the production of voice both in singing and in speaking. One or two extracts from the chapter give a clear idea of what the book contains and what aim the authors pursued in writing it. Thus, they say, "All public speakers as well as singers should receive a scientific training in the mechanism and right employment of the organ of voice. It is precisely here, on the threshold of their art, that many elocutionists fail. They occupy themselves with articulation, pronunciation, intonation, modulation, emphasis, and gesture, and having but little, if any, physiological knowledge, are therefore unable to form a true basis of voice-production;" and, further, "Unfortunately, but little attention is paid to this fundamental training; and it is only when singers, and especially speakers,

find their voice fail that they begin to think they have not used the organ aright;" and, finally, "By the term, a highly cultivated voice [in speaking], is not meant the application of those rules of reading which are taught by elocution masters, but a cultivation of the voice on sound acoustic and physiological principles, analogous to those which are so eminently successful in cultivating the voice of song." Only he who has had experience in the treatment of laryngeal diseases the direct result of abuse of the voice, can appreciate the truth of this.

Then follow chapters on acoustics, speaking and singing, anatomy and physiology of the organs of voice, etc., and finally two chapters on "The Ailments of the Voice-User" and on "Defects of Speech." In the former of the two the different ailments are treated under the heads of "catching cold," "sore throat," "pharyngitis, or inflamed throat," "clergyman's sore throat," "elongation of uvula," "enlargement of tonsils," etc. The authors strongly advocate the removal of hypertrophied tonsils by ablation, and the amputation of elongated uvula, and go at length into the consideration of the deleterious effects produced upon the voice by these pathological conditions, but throughout the chapter, and, in fact, throughout the whole book, no mention is made of the influence of pathological changes in the naso-pharynx and nasal cavities upon the voice,—an omission which is to be deplored, since it makes this otherwise excellent work imperfect.

The last chapter treats of "Stammering and Stuttering," and in it is given, as the most common cause of this defect of speech, a faulty respiration. The treatment consists in surgical interference if such is necessary, and in education of the organs of articulation. The authors conclude with an appendix describing the process employed in photographing the living larynx in the act of singing, and contains a letter from Dr. Wylie on approximation of the pocket-ligaments in voice-production.

The illustrations are partly wood-cuts, printed in the text, and partly mechanical reproductions of the excellent photographs of the living larynx and palate, taken by Mr. Browne. C. S.

BRAIN-EXHAUSTION, WITH SOME PRELIMINARY CONSIDERATIONS ON CEREBRAL DYNAMICS. By J. LEONARD CORNING, M.D., etc. New York, D. Appleton & Co., 1884. Pp. 234, 8vo, cloth.

Although an admirer of Dr. Hammond and the late Dr. George M. Beard, the author is not willing to accept the comprehensive term *neurasthenia* as representing a satisfactory diagnosis in many cases of cerebral functional disease; nor does he endorse the extravagance of nomenclature indulged in by Dr. Beard in his labored classification of the

different varieties of morbid fears. Dr. Corning regards brain-exhaustion as an expression of defective cell-nutrition in the hemispheres, the causes being predisposing and exciting. Among the former are considered false educational conceptions and methods, vicious mental habits, abnormal living, worry, and anxiety; and among the latter the evil effects of tobacco and alcoholic excesses are prominent, and also idleness or insufficient employment for the mind, and excessive sexual indulgence.

The work is divided into Preliminary Considerations; Clinical and Pathological; Causation; and Considerations on the Principles of Treatment. The greatest stress is, very properly, laid upon hygienic treatment, food, and regularity in sleep and exercise. The use of sedatives is deprecated as the rule, and bromides are to be used with caution. In sleeplessness due to anæmia, the author suggests that a few drops of nitrite of amyl may be inhaled, or, in the contrary condition, chloroform may be cautiously administered. The improvement of nutrition being one of the main features of the treatment, the patient should have easily-digested fluid nourishment at intervals during the night, if he should wake. The value of nitrogenous food in brain-exhaustion is insisted upon, and wine of coca is highly praised as a restorative. The author, in conclusion, describes an apparatus for compressing simultaneously the carotids and stimulating by electricity the trunk of the sympathetic, which he believes to be a valuable aid in the treatment.

The introductory section is less satisfactory than the remainder of the work. The correlation of the physical forces and mind is certainly not so susceptible of easy demonstration as Dr. Corning apparently thinks it is. Certainly he is hardly warranted in referring to the views of those who disagree with him as absurd. With this exception, the book is one to be read with interest and advantage. How many cases of cerebral exhaustion have been neglected as "only hysteria," or, on the other hand, mistaken for insanity and threatened with incarceration, it is impossible to know; but it is certain that by an early recognition of this condition of functional disorder of the brain, followed by appropriate regimen, a case will often recover; but chronic cases accompanied by organic changes are, almost without exception, incurable. F. W.

OPERA MINORA. By EDWARD C. SEGUIN, M.D. New York, G. P. Putnam's Sons, 1884.

In the preface of this book, Dr. Seguin states that "an apparently unlimited interruption having taken place in my professional life, the idea occurred of reprinting my various medical contributions for private circulation." Before, however, the idea could be

incarnated in black and white, Dr. Seguin has remarried and returned to professional activity, so that the present volume may be looked upon as a jubilee. To criticise or to praise a book like this seems to be a work of supererogation. All of its very varied contents have been long before the profession. Much of it, indeed, is of interest chiefly as past landmarks whose distance reveals how rapid is the present onward rush of medical progress and how far in professional lore and thought even yesterday is from to-day. The reputation of Dr. Seguin, the virtues and faults of his work, the extent of his labors and of his originality, every page of the present volume—are they not in the mouths of all men? And others, like ourselves, will no doubt treasure the book, and place it upon their shelves as the historical record of sixteen years' (1866 to 1882) labor on the part of one of our most active and successful neurologists. It seems to contain all—good, bad, and indifferent—that Dr. Seguin has written, except, perhaps, editorial matter. Addresses, clinical lectures, reports of cases, and clinical, pathological, and therapeutic articles are encaged as a most happy, peaceful family between the shagreened black covers. The number of these papers is nearly one hundred, and their subject-matter as varied as may be.

It is a somewhat remarkable fact that so few medical writers over thirty-five years of age consider it necessary to read modern literature concerning drugs before they make positive assertions as to the action of such remedies; remarkable how, with contented mien, they put forth the well-chewed cud of husks swallowed during their student-life, and expect that no one will say aught as to the ancient and musty odor of the mass. If any unfortunate student of to-day, having read the present volume, should at his examination say, with its author, "Conium is the typical medicine of this class [spinal depressants], and seems to be the direct antagonist of strychnia," he would probably have to be carried out upon a shutter, mortally wounded. In clinical pathology Dr. Seguin is strong, but in regard to the physiological action of remedies he is hardly a Samson. H. C. W.

SEXUAL NEURASTHENIA. By GEORGE M. BEARD, A.M., M.D. New York, E. B. Treat, 1884.

This book of some two hundred and seventy small pages of large type is published under the editorship of Dr. A. D. Rockwell, as a posthumous work, or, if we may believe the assertion of the title-page, it is a posthumous manuscript. It represents in strong relief the faults which, to a greater or less extent, are manifest in all of the books originated from its author,—a wearisome spreading out of material, a dilution with words, as though thought, like Hahnemannian medi-

cines, could be potentized by attenuation; the presence also of the feeling that "I am one, and the whole profession another; the books say this, but I say that."

There are, however, a few things worthy of note. One very important idea is brought out more strongly than is often seen,—namely, that sexual exhaustion is often a purely local affection, and not connected with or dependent upon any general neurasthenia. A second fact which is noted by Dr. Beard, and which our experience confirms the verity of, is that in some cases asthenopia is directly related to sexual exhaustion.

If the reader of the treatise can gain any practical help from the chapter on the treatment, he will be more fortunate than we have been. In conclusion, if judgment must be passed, we would advise the outlay of any private library funds in a different direction from this work, which may be worthy of a few minutes' overlooking, but of nothing more. We hardly think it will add to Dr. Beard's reputation, and unless, being read by the victims of sexual disease, it adds to Dr. Rockwell's practice, it had better not have been published: possibly it might have been condensed into a good journal article.

H. C. W.

HISTORY OF THE DISCOVERY OF THE CIRCULATION OF THE BLOOD. By HENRY C. CHAPMAN, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in Jefferson Medical College. Philadelphia, 1884. 8vo, pp. 56.

This essay was delivered as a lecture before the class of the school in which the author is professor, and will constitute, as we are told, with but little modification, one of the chapters of a work on "Physiology" he is now preparing for the press. As such, it calls for a more extended notice than it would if it were merely an ordinary address before a class of students.

The story of the gradual discovery of the way the blood moves through the body is here related very clearly, and in a popular style, calculated to interest greatly the young men to whom it was told. We do not know, all things being considered, in what other place this instructive history is set forth in a more entertaining way.

The historical part of the article "Circulation" in the *Dictionnaire de Médecine* has the name attached to it of Gerdy. Deeply learned, conscientious, and painstaking to the last degree, Gerdy was eminently qualified for such an undertaking, and it is difficult to see how any history of the way in which our present theory of the circulation of the blood was gradually established by many observers during the course of some fifteen centuries can ever excel the one which Gerdy has given us. However, this is an article not often read by the class of students to whom

this present essay is addressed, and they are not likely to be benefited by it, unless it be indirectly.

We are told, as said before, that this essay will be published as a chapter in a work on physiology, with "but little modification." Let us hope that "little" here means *non multum, sed multa*. There are a number of small errors, typographical and otherwise, which should be, and doubtless will be, corrected. In the very first line we read, "In the *minds* of every one;" and in the last sentence but one we are told that "with the progress of knowledge, however, the *significance* of discoveries made often ages ago and long forgotten *become*, in time, apparent to all," [*Italics* by the reviewer.] An eminent scholar is at the bottom of one page *D'Aremberg*, and at the top of the next *Daremberg*. Servetus certainly never wrote *de Spiritus Sancto* (page 16); nor did Fontenelle write *éloge* without an accent in the *Hist. de l'Acad. [des] Sciences* (page 53). Les Œuvres complètes d'Hippocrate, par É. Littré, in ten volumes, is thus referred to: "*Œuvres complètes d'Hippocrate, par E. Littré, Tomes 8.*" It is doubtful whether Aristotle would recognize his *ἰσότης* as *ισότης* (page 8). He certainly would not, unless pronounced according to the accents.* Page 11: "Their very name, artery, from *αἷρ*, *air*, and *τῆρεω*, *I carry*, conclusively proves how absolutely ignorant," etc. As *τῆρεω* never was made to mean *I carry* by any Greek writer, it is rather hard thus to consider absolute ignorance as conclusively proven.

We point out a few of the errors, the result of haste, and maybe of carelessness, to be met with in this very interesting essay, and hope to see *many* modifications, and not *much* modification, in the forthcoming treatise on Physiology.

AMICUS PLATO.

THE GENERAL PRACTITIONER'S GUIDE TO DISEASES AND INJURIES OF THE EYES AND EYELIDS. By LOUIS H. TOSSWILL, B.A. London, F. & A. Churchill.

This little manual, the author states, is intended for the use of the general practitioner, and not for those who have time for the perusal of larger works. The first two chapters are devoted to methods of examination; then follows a description of the various forms of conjunctivitis and diseases of the cornea. Chapter XIV. is devoted to the consideration of iritis; a chapter is given severally to cataract, glaucoma, sympathetic irritation and ophthalmia, diseases of the lids, diseases of the lachrymal apparatus. Part II. deals with injuries of the eyes, as from burns, scalds, injuries, etc. In our opinion, this section is

the more valuable of the two, because it deals with what may be called the emergencies of eye-surgery: with these any practitioner may be obliged to cope, and the chapters referred to would doubtless be of great aid. We think, however, that any one who attempts to treat even such common affections as conjunctivitis or iritis should not limit himself to so elementary a treatise as the one under consideration. Experience has repeatedly demonstrated the folly and peril of such a course. H.

GLEANINGS FROM EXCHANGES.

TREATMENT OF NÆVUS BY A NEW METHOD. —Dr. H. O. Marcy, of Boston, in a communication to the *Archives of Pediatrics*, recommends the following ingenious method of treatment of angiomatic growths, in order to avoid destruction of tissue and subsequent contraction and cicatricial deformity. He uses for the cure of a variety of vascular growths a suture which he has called "the shoemaker's stitch," since in it the ligature is carried, by means of a long needle set in a handle, in opposite directions through the same puncture, the eye of the needle being near to its point, which is without cutting edges.

Armed with the ligature, the needle is thrust deeply under and quite away from the vascular growth. The ligature is then detached from the protruding point, and the other end of the ligature threaded and then drawn out with the needle, which is reinserted close to the first puncture, and thus the process is continued until the entire mass is enclosed, and fixation is completed by a single knot. In this way uniform and steady pressure can be attained, and maintained as long as desired. A report of a case is appended, of a large nævus on the chest, the action of the ligature being aided by a firm compress. It was also found necessary to make two parallel incisions, one on each side of the growth, in order to facilitate the operation and render the constriction less painful. Such incisions are not usually necessary, however. The ligature was removed on the fifth day. Now, two years after the operation, the result is perfectly successful, with but little cicatricial contraction.

POPULAR RECOGNITION OF THE VALUE TO THE COMMUNITY OF MEDICAL SCHOOLS. —The recent gift of Mr. Andrew Carnegie to Bellevue Hospital Medical College of fifty thousand dollars to be expended in the erection of a laboratory building and apparatus for practical work in everything relating to microscopical and experimental research in different departments of medicine, calls to mind the gifts of Mr. John Welsh and Mr.

* Some years ago, a gentleman we knew dined at the table of the Archbishop of Canterbury, and he told us that he had occasion to refer to Kingsley's novel, and he called it *Hypatia*. No one there knew what he was talking about, until some one cried out, "The gentleman means *Hypatia*."

Henry O. Gibson, the Bloomfield H. Moore fund and the Rhea Barton fund, and other evidences of public appreciation, which have been repeatedly manifested to our own University of Pennsylvania. The Johns Hopkins University owes its existence to the generosity and practical wisdom of a layman. The Gross Professorship of Pathological Anatomy has been proposed in the interests of higher medical education, and is receiving contributions from the profession. We hope the good example that has been set by a few will be followed by others, in order that the schools may possess abundant facilities for teaching medicine in the best manner. In connection with this, we should also note the fact that the Western Reserve Medical College has lately been the recipient of a handsome donation from one of Cleveland's prominent citizens, sufficient to furnish ground and put up a building in that city which shall be especially adapted to and equipped for the purpose of giving instruction in medical science; and it is believed that the College will also receive an endowment from the same source.

INOCULATION FOR PROTECTION FROM YELLOW FEVER.—In a letter to the *Sanitary News* (June 15), Dr. Domingos Freire, of Rio Janeiro, states that he has "vaccinated four hundred and fifty persons, for the most part foreigners recently arrived. Freedom from yellow fever has been pronounced among those thus vaccinated, for they have passed through a quite severe epidemic, and only six deaths have occurred among the four hundred and fifty vaccinated persons, that is to say, less than two in a hundred, while more than a thousand deaths have occurred among the non-vaccinated,—the mortality of the non-vaccinated sick being about thirty to forty per hundred." Barring the very evident flaw in the reasoning, it would appear that Dr. Freire had certainly very good reason for continuing his observations. It would be very interesting to know how long the effect of the inoculation persists, and what are its remote results.

POISONING BY HYOSCYAMINE.—In the *Physician and Surgeon* for June, 1884, is an account of a case, by Dr. A. J. Burdens, of accidental poisoning by a solution of Merck's amorphous hyoscyamine. The patient, 75 years of age, who had taken a quantity equivalent to three grains of the alkaloid, was found in an unconscious condition, his head thrown back with some rigidity, face flushed, pupils dilated, pulse rapid, arterial tension much diminished, and breathing stertorous and labored.

A soft-rubber catheter was introduced through the nostril into the cesophagus, and mustard-water thrown into the stomach, which produced free emesis. The stomach

was then washed out with tepid water, and a quarter of a grain of morphia given hypodermically. Cold applications were made to the head, and the morphine was repeated every two hours in decreasing doses. When he returned to consciousness (after several hours), he could not speak for a time, owing either to excessive dryness of the throat or paralysis of the muscles of phonation. For a few days he complained of dryness of the throat and of a ropy, tenacious mucus, which was expectorated with difficulty and considerable pain. To relieve this symptom, jaborandi was given, with happy effect. The remarkable features in the case were the absence of any physiological or toxic effects from the morphia, of which a grain and a half was given in all, and the rapidity with which the throat-symptoms yielded after giving the jaborandi.

SUPRAPUBIC LITHOTOMY IN A WOMAN.—Lawson Tait reports a case in which a calculus occurred in the bladder of a woman who had been the subject of a plastic operation for a large vesico-vaginal fistula in which the cervix uteri had been turned into the bladder permanently, menstruation occurring into its cavity. Two years later she had symptoms of stone in the bladder; the calculus was then removed by crushing. Subsequently another stone developed, which was inaccessible through the urethra. Not wishing to undo the work already done, which had required seven operations to complete, Mr. Tait performed suprapubic lithotomy and removed the stone. Although the peritoneum was opened, the patient made a good recovery. The peritoneal wound was carefully closed, and a drainage-tube passed through the urethra and the wound. The stone was a soft phosphatic concretion, and was adherent to the sac in which it had formed.—*Medical Press and Circular*.

A NEW TREATMENT FOR NEURALGIA.—The latest agent introduced for the relief of neuralgia is a one-per-cent. solution of hyperosmic acid, administered by subcutaneous injection. It has been employed in Billroth's clinic in a few cases. One of the patients had been a martyr to sciatica for years, and had tried innumerable remedies, including the application of electricity no fewer than two hundred times, while for a whole year he had adopted vegetarianism. Billroth injected the above remedy between the tuber ischii and trochanter, and within a day or two the pain was greatly relieved, and eventually it quite disappeared. It would be rash to conclude too much from these results, in the face of the intractability of neuralgia to medication, but if it really prove to be as efficacious as considered, hyperosmic acid will be a therapeutic agent of no mean value.—*Medical Record*.

MEDICAL STUDY IN EUROPE BY AMERICANS.—Dr. Charles S. Starr, President of the Medical Association of Central New York, at its annual meeting in May delivered an address upon an unusual but not uninteresting topic. Contrasting the facilities for the study of medicine of to-day with those of thirty years ago, he discerned a vast change. It is no longer necessary to go to Europe to find good medical schools. He opposed sending young men without practical experience to Europe, and recommended that the visit should be delayed until years would enable the student better to improve the opportunities for study of special courses. He preferred Germany to France, and particularly lauded Vienna.—*Medical Annals*.

REMARKABLE RECOVERY FROM A SEVERE ABDOMINAL WOUND WITHOUT ANTISEPSIS.—Dr. J. C. McMillan sends us the history of a man, an engineer, who had received a cut in the abdomen during a fracas. The cut was four inches long, near the umbilicus, and extended into the peritoneal cavity. The intestines were protruded, and the small intestine cut half through in one place. The patient had lain in the road for four hours before Dr. McMillan saw him, and the protruded bowels were covered with dirt. He was taken to a house, anæsthetized, the intestines cleaned with lukewarm water, the small intestine sewn up with silk suture, and the abdominal wound closed. The patient was well and discharged in two weeks.—*Medical Record*.

ACTIVE PRINCIPLE OF BOLDO.—Boldo leaves, which were introduced as a new remedy on this side of the Atlantic about five years ago, have, so far, not come extensively into practice. Sample lots of the fluid extract have been sold, but the medicine, which was recommended as an alternative in syphilis, has not apparently proved very satisfactory. The leaves have recently been examined by a French chemist, M. Chapoteaut, who has isolated a glucoside soluble in alcohol and benzine and insoluble in water. Its most marked property is that of an hypnotic, and, when subcutaneously injected, it increases the flow of bile.—*Canadian Pharmaceutical Journal*.

PATHOLOGY OF BRICKS.—A French exchange states that M. Parize has discovered swarms of bacteria in the very centre of a common house-brick. It is not stated whether tubercles were present or not.

NOTES AND QUERIES.

GASTROTOMY OR GASTROSTOMY.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES.

July 3, 1884.

DEAR SIR,—Will you allow me to say, in reference to the remarks under the above heading in the number of the

Times for June 14, 1884, that the term *gastrostomy* is simply an adaptation of the French *gastrostomie*, employed by Sédillot, and that the object of the operation is not the formation of an "os," but the establishment of a "stoma" in the gastric region?

Very respectfully,

JOHN ASHHURST, JR.

2000 W. DE LANCEY PLACE.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY FROM JUNE 22, 1884, TO JULY 5, 1884.

CLEMENTS, BENNETT A., MAJOR AND SURGEON.—Ordered to relieve Major Joseph P. Wright, Surgeon, of his duties as attending surgeon at the Leavenworth Military Prison, Fort Leavenworth, Kansas. Major Wright, on being relieved, ordered to report to the commanding general Department of Texas, for assignment to duty. Paragraph 7, S. O. 144, A. G. O., June 21, 1884.

HARTSUFF, ALBERT, MAJOR AND SURGEON (Fort Riley, Kansas).—Granted leave of absence for one month, with permission to apply for one month's extension, to take effect when his services can be spared. Paragraph 6, S. O. 130, Headquarters Department of Missouri, June 25, 1884.

MIDDLETON, J. V. D., MAJOR AND SURGEON.—Ordered to relieve Surgeon B. E. Fryer from duty as post surgeon, Fort Leavenworth, Kansas, on or before July 1. Paragraph 5, S. O. 135, Headquarters Department of Missouri, June 28, 1884.

DICKSON, JOHN M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon, Alcatraz Island, California. Paragraph 3, S. O. 71, Headquarters Department of California, June 19, 1884.

GIRARD, A. C., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for six months, with permission to go beyond sea. Paragraph 11, S. O. 148, A. G. O., June 26, 1884.

GIRARD, J. B., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to relieve Surgeon W. E. Waters from duty as post surgeon, Plattsburg Barracks, Plattsburg, New York. Surgeon Waters, upon being relieved, directed to return to his proper station (Madison Barracks, New York). Paragraph 3, S. O. 131, Headquarters Department of the East, June 30, 1884.

BENHAM, R. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Department of Dakota to Department of Texas.

GORGAS, WILLIAM C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Department of Texas to Department of Dakota. Paragraph 8, S. O. 150, A. G. O., June 28, 1884.

WALES, PHILIP C., FIRST LIEUTENANT AND ASSISTANT-SURGEON.—From Old Fort Colville, Washington Territory, to Fort Cœur d'Alène, Idaho. Paragraph 3, S. O. 89, Headquarters Department of Columbia, June 23, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM JUNE 28, 1884, TO JULY 5, 1884.

Surgeon J. S. KNIGHT, placed on retired list.

P. A. Surgeon R. WHITING, detached from U.S. steam-ship "Vermont," ordered to Marine Rendezvous, New York.

Surgeon H. J. BABIN, detached from Marine Rendezvous, New York, ordered to U.S. steam-ship "Minnesota."

Surgeon H. M. WELLS, ordered for examination preliminary to promotion.

P. A. Surgeon G. P. LUMSDEN, detached from U.S. steam-ship "Pensacola" and placed on waiting orders.

Surgeon H. M. WELLS, detached from Naval Hospital, Brooklyn, ordered to U.S. steam-ship "Lancaster."

Dr. J. S. SAYRE, appointed assistant-surgeon, commission dated June 27, 1884.

Dr. F. J. B. CORDEIRO, appointed assistant-surgeon, commission dated June 27, 1884.

vessels, the latter being sometimes completely occluded. Koch, in opposition to other authors, emphasizes the absence of the cocci in the blood-vessels themselves. It is not difficult to apply this to cases where the orbital tissue becomes involved. If the orbital tissue be invaded, then the disease may progress along the connective tissue in which the vasa centralia are embedded, and reach the perivascular spaces in the retina. The vessels thus become affected, perhaps disease of the vessel-walls, thrombosis, embolism in certain branches, perhaps closure of certain vessels by the cocci in the perivascular spaces, followed.—*Klinische Monatsblätter*, April, 1884. [The practical importance of observations like these will be evident when the similarity of the vascular apparatus in the eye and in the brain is understood. We may look upon the eye as a process of brain-structure, from the inspection of which important lessons may be drawn as to pathological processes occurring in portions of the brain hidden from view. We have in the above cases illustration of a pathological process occurring in the retina, a tissue supplied by a terminal artery, and there seems to be no good reason to doubt that essentially the same phenomena occur in those portions of the brain-structure which have the same kind of vascular supply. The two cases above described are essentially the same. To Knapp belongs the credit of publishing the initiatory as well as the later retinal changes from accurate observation. Carl has accurately pictured simply the later stage of the process. The practical point in these cases is to find the true explanation of these phenomena. Knapp thinks that through the orbital cellulitis pressure was exerted on the central artery of the retina, circulatory disturbance occurred, with consequent thrombosis, etc. The reviewer thinks this will not stand close examination. Carl starts with a more correct pathological idea,—viz., that erysipelas is essentially a lymphangitis. The reviewer called attention four years ago to the probability that the eye-affections of erysipelas were brought about through the lymphatics.* The vulnerable point both in Knapp's and in Carl's explanation is the attempt to explain these phenomena on purely mechanical principles. Without

attempting a complete exposition, the reviewer wishes to put the following on record as his solution of these phenomena. A diseased condition of the lymphatics is the starting-point. Beyond question the movement of the blood and also that of the lymph are intimately associated with the processes of nutrition. While it seems to be true that mere blocking up of the lymph-channels, as by ligature, produces very little disturbance in the arterial system, it is different with the abnormal processes which occur in the lymphatics in erysipelas. Here an injection of the capillaries corresponding to the invaded district occurs; hence the peculiar abrupt margin of erysipelatous redness in the skin, best explained by the hypothesis of dilated arterioles consequent upon the lymphangitis. Essentially the same thing occurs in the retina, but here we have to do with a terminal artery (*end-arterie*). The retinal arterioles dilate, the blood is driven with a rush into the veins, and the phenomena above described are produced. The artery does not fill again, because the conditions for normal propulsion of the blood are wanting, and the current simply passes by the orifice of the central artery. If anastomoses with other vessels (as in the skin) existed, the result would be different. This explanation is based on the established fact that the blood-vessels are living organs capable of responding to excitation, etc., upon a theory which the reviewer holds as to the physiology of blood-propulsion in the retina,† and also upon the supposition that the capillary area in the retina exceeds in capacity the arteria centralis. If the vaso-constrictors of the retinal arterioles fail to act, the arterial system of the retina will be emptied of its blood as surely as a colander of the water poured into it.—H.]

GALVANO-CAUTERY IN CONJUNCTIVAL AFFECTIONS.

Fröhlich, of Berlin, has had satisfactory results from this agent in the treatment of trachoma and follicular catarrh. There is very little reaction from its use. The granulations are not destroyed in one sitting, but in several, the destruction being accomplished by a pointed cautery attached to an ordinary zinc-carbon element.—*Klinische Monatsblätter*, January, 1884.

* Metastatic Tenonitis in Diphtheria, by Albert G. Heyl, M.D., American Journal Medical Sciences, April, 1880.

† Vide Transactions of the American Ophthalmological Society, 1883, p. 530.

A NEW POWDER-APPLICATOR.

Magnus, of Breslau, describes a new instrument, invented by Kabierske, for the application of medicinal powders to diseased surfaces. It consists of a rubber balloon connected at a right angle with a glass flask which holds the powder. Air is driven into the flask on compressing the balloon, which drives the powder out of another opening into the exit-tube. Magnus has used this with great satisfaction in his clinic.—*Klinische Monatsblätter*, May, 1884.

A NEW INSTRUMENT FOR TATTOOING THE CORNEA.

Parisotti has added a modification to a tattooing instrument, consisting of a canal which holds the coloring-material and ends with an india-rubber bulb. Pressure on the bulb will regulate the flow of the ink.—*Centralblatt für Augenheilk.*, May, 1884.

MEDICATED BOUGIES IN THE TREATMENT OF DISEASES OF THE LACHRYMAL SAC, ETC.

Hotz, of Chicago, makes use of gelatin bougies medicated with various substances. The sizes correspond to Bowman's probes Nos. 2-6. Several hours are required for the solution of the probe.—*Centralblatt*, May, 1884. [The reviewer has made use of such probes made by C. L. Mitchell, M.D., & Co., and thinks them a very useful remedy. These probes of Mitchell & Co. are very much more rapidly dissolved than those used by Hotz, about twenty minutes sufficing for the solution of one corresponding to Bowman's No. 3. This is an advantage if the intention is simply to apply medication to a chronically inflamed tissue. The same principle, the reviewer thinks, applies both in this case and in diseased conditions of the conjunctiva,—viz., that the application will be more effective if used in forms not very quickly absorbed; e.g., in the form of salves in conjunctival diseases, or of a dissolvable gelatin probe in lachrymal-sac affections. If the design is to dilate a stricture of the duct, then the harder probes, as used by Hotz, would seem preferable.—H.]

HEMORRHAGE AFTER CATARACT-EXTRACTION.

Fieuzal reports the following case. An old man was successfully operated on as regards the right eye and discharged cured. The extraction was performed afterwards

on the left eye. Immediately after the expulsion of the lens a violent intraocular hemorrhage occurred; loss of the eye followed, finally necessitating enucleation. Urine was normal, also the intraocular pressure. There was slight atheroma of the arteries. In the discussion on this case, Dianoux said that he had seen the same thing occur three hours after the operation. Abadie would, in case the first eye were lost through this complication, endeavor to prevent its occurrence, in operating on the second, by compressing the carotid and by hypodermics of ergotin. Fieuzal remarked that we could not always know that this would occur, as his own case showed.—*Centralblatt f. Augenheilk.*, May, 1884. [The above was called forth by the case reported by Warlomont (see Ophthalmological Report, *Medical Times*, April 5, 1884.). It calls attention to a complication doubtless rare, but worth taking into consideration. The suggestion made by the reviewer in the comment on Warlomont's case as to the hemorrhage being due to the diseased condition of the vessel-coats seems to be confirmed by Fieuzal's case. A plain inference from this is the importance of examining into the condition of the vessels before the operation. If vessel-degeneration be the cause of the hemorrhage, we shall perhaps not treat it advantageously after the plan recommended above by Abadie. A better way, the reviewer thinks, is to avoid the iridectomy in the extraction, as recommended in the comment on Warlomont's case (see *Medical Times*, April 5, 1884.). The iridectomy undoubtedly exercises an important influence upon the intraocular circulation, and it seems to be a fair conclusion that when vessel-degeneration exists it is liable to be followed by intraocular hemorrhage. It would be worth a trial to apply the Heurteloup leech to the temple the moment the tendency to intraocular hemorrhage makes its appearance, as the intraocular circulation can be perceptibly influenced in this way.—H.]

INTRAOCULAR HEMORRHAGE FROM DISTURBED MENSTRUAL FLOW.

Dor reports a case of hemorrhage into the vitreous in a case of amenorrhœa. In the discussion on this case, Coursserant related the details of a case in which the cessation of the menstrual flow was caused by violent mental excitement. The hemorrhage into the vitreous recurred with the return of each period. Parisotti referred

to an observation of Rampoldi relating to the appearance of blood-corpuscles in the corneal tissue at each menstrual period.—*Centralblatt f. Augenhk.*, May, 1884.

RETROBULBAR CAVERNOMA.

Von Brincken reports the following. Patient was 2½ years old. A huge exophthalmus of the right eye existed, said by the parent to have developed in eight days. Extirpation of the tumor without enucleation was attempted. Conjunctiva was opened between superior and exterior recti. A bluish fluctuating mass became visible, from which several spoonfuls of venous blood escaped after having been punctured. The eyeball then retreated to the normal position. On the following day the ball again became prominent. The same procedure was again adopted, the tumor being freely incised. Secondary hemorrhage followed this operation, and the eyeball and tumor were removed by operation without considerable loss of blood. Microscopic examination by Prof. Neelsen showed the tumor to be an "angioma cavernosum venosum." Most of the orbital angiomas described in the literature of the subject have been connected with the arterial system.—*Klinische Monatsblätter*, April, 1884.

THE TREATMENT OF ULCUS CORNEÆ SERPENS.

Meyhöfer, of Görlitz, reports his experience in one hundred and twenty-six cases of *ulcus serpens*. He divides his methods of treatment into three stages. First stage, that in which the treatment was purely medical; e.g., application of moist heat, atropine, aqua chlori, weak solutions of carbolic acid. Result very unfavorable. Second stage, that in which the treatment was almost purely operative. The operation was essentially the Saemisch, except that the cut was made either at the demarcation-line dividing the sound tissue from the ulcer, or in the sound tissue not directly through the floor of the ulcer. The result was very satisfactory. This experience led him to think that the cut should not be too small; that the repeated opening of the wound with a probe was unnecessary; that anterior synechia seldom followed the operation. He attributes the last to making the cut in sound tissue; the rapid healing of the cut, the restoration of the anterior chamber, preventing the synechial attachment. The third method of

treatment was that of iodoform in connection with scraping the floor of the ulcer. The idea is that iodoform is not antiseptic but aseptic in its operation; that is to say, that iodoform placed upon an abraded corneal surface not already infected with micro-organisms will prevent the infection, but applied to an already infected surface it will not produce any very special effect. Hence the suggestion in suppurating and infiltrated ulcers to scrape away the diseased surface until sound tissue is reached, upon which the iodoform may be employed. Iodoform applied to the *ulcus serpens* seemed to exert little or no influence. In thirty-nine cases treated on the iodoform and scraping process, twenty-nine were successfully treated, eight required the Saemisch cut and were also cured, two cases were lost through corneal suppuration in spite of the incision, etc. The scraping process was accomplished by a small spoon made for the purpose. In the superficial ulcers the operation is easily performed; in the deep ones not so easily, but still the removal of the diseased tissue from edges of the ulcer, even in these cases, exerted a favorable effect.

A NEW THERAPEUTIC MEASURE IN CERTAIN FORMS OF CORNEAL ULCER.

Professor Kuhnt, of Jena, describes a new method of treatment adapted for torpid corneal ulcers situated close to the limbus. The clinical features of the form of ulcer referred to are (a) tendency to increase in depth until anterior chamber is opened; (b) the floor of the ulcer of a gray tinge, sometimes covered in spots with yellowish deposits; (c) the edges of the ulcer not undermined; (d) paracentesis corneæ is followed by rapid healing. The paracentesis is very apt to be followed by anterior synechia, and, accordingly, Kuhnt has tried the following operation. The ulcer is first freed from the diseased surface-material by a needle, and then touched with a solution of corrosive sublimate; a flap of conjunctiva is then raised from the scleral surface (somewhat of the shape of the flap in Teale's operation for symblepharon) and laid upon the corneal ulcer; slight pressure on the flap seems to be sufficient to fix it in its place; the flap is not entirely detached from the sclera, but, through its broad pedicle, draws its nourishment from the scleral conjunctiva; the eye is simply bandaged. Pain ceases about

an hour after operation, and at the end of three days the flap is observed to be very much injected and firmly attached. Bandage replaced and allowed to remain five days, when the case may be looked upon as well. The above represents the course in the first case; two other cases were operated on, with a similar result.—(Extract from Kuhnt's monograph.)

SOME NEW OBSERVATIONS IN RETROBULBAR NEURITIS.

Hock, of Vienna, thinks that there are certain forms of retrobulbar neuritis in which the disease starts from the nerve-sheath and involves secondarily the optic nerve-trunk. This affection, which may or may not be accompanied by visible changes in the fundus, and in which the vision is variously affected, is especially characterized by pain about the orbit, pain upon movement of the ball, and also upon pressure from before backward. He adds another symptom, based on observation,—viz., that the location of the inflamed spot in the sheath may be determined from the direction of the ocular movement which produces the most pain, or which alone of all movements is followed by pain: thus, if the movement upward is alone of the possible ocular movements followed by pain, then the inflammatory focus is in the inferior part of the sheath, because it is stretched in this movement. In this case the upper part of the visual field corresponding to the lower half of the fundus would be defective. Hock bases this upon a number of clinical observations. (*Centralblatt für Augenheilk.*, April, 1884.) [This may be so; at all events, it is worth bearing in mind in clinical work. It does not seem to the reviewer that the cases given by Hock in his paper conclusively establish the point.—H.]

A STUDY OF THE NUTRITIVE VALUE OF BRANNY FOODS.

BY N. A. RANDOLPH, M.D.,

Lecturer on Physiology, University of Pennsylvania,
AND

A. E. ROUSSEL, M.D.,

Late Resident Physician at the Philadelphia Hospital.
Read before the College of Physicians of Philadelphia.

FROM an economic stand-point the question of the nutritive value of bran is one of great importance, for the

removal of this portion of the wheat implies a loss of from 17 to 20 per cent. in the weight of the grain. In spite of this loss, which necessarily renders white bread more expensive than that made from whole wheat flour, even the poorest inhabitants of most civilized countries where bread is not the staple food insist upon eating the bread made from the finer grades of flour. A tendency so wide-spread as this would apparently indicate the unconscious summation of the experiences of many generations, and go far towards proving the propriety of such a selection.

The use of flour representing the entire wheat grain has, however, been long and ably advocated; the reasons given for the retention of bran being that its removal entails the loss of—

I. "Nutritive salts" (Nährsalze of Liebig).

II. Carbohydrates.

III. Proteids, notably gluten.

The facts also that branny foods in common with many others will spur an atonic bowel to activity, give due bulk to its contents, and induce the passage of stools of the normal or feculent consistency are noteworthy; but their further consideration is beyond the limits of the present paper. The other reasons for the retention of bran in wheat flour will be discussed *seriatim*.

I. The fact that fine flour contains a much smaller percentage of salts than does either bran or the whole wheat—a fact evidenced by the relatively small amount of ash which it yields—forms the basis of the theory of Liebig,* that in the removal of bran nutritive salts of value are lost. The investigations of Meyer† and Forster‡ are often cited as showing that after the removal of bran these salts are still present in quantity sufficient for the needs of the economy.

Our experiments upon young pigs, described farther on, show that, although survival is quite possible upon an exclusive diet of bread from white flour, growth is much more active upon a diet of bread containing a greater amount of inorganic matter. It is possible that Liebig's estimate of the needful amount of inorganic matters was too high, but it is equally noteworthy that there is a tendency on

* *Chemische Briefe*, 1851.

† *Zeitschrift f. Biologie*, vol. vii. p. 33.

‡ *Ibid.*, vol. ix. pp. 293–380.

the part of late writers to give insufficient prominence to the importance of these elements of food. It may not be out of place here to mention a striking illustration of the absolute necessity for inorganic salts in the fluids of the economy, as recorded by Dr. S. Ringer.* This observer found that while minnows were kept in ordinary tap-water they would live for weeks unfed. When, however, they were placed in distilled water they died, on an average, in four hours and a half. Further, in a rude imitation of spring-water, made by the addition to distilled water of potassium and calcium chlorides and of sodium bicarbonate, the fish lived on an average about two weeks. Study of the factors in the experiments showed that death was due to a diminution of salts in the economy of the fish. That such diminution, even when very slight, could result fatally, was shown by an analysis of the distilled water after the death of the fish, traces only of inorganic matter being found.

II. The loss of carbohydrates involved in the removal of bran appears at first sight not inconsiderable, as it amounts to about 20 per cent. of the carbohydrates present in the entire grain. The members of this group represented in bran are starch and cellulose. The former is present in extremely small amount, while the latter, as has been proved by the experiments of Donders,† Mulder,‡ and Poggiale,§ is digestible in any noteworthy degree|| by the herbivora only. The observer last named subjected a given weight of dry bran to the successive actual digestions of two dogs and one hen, and thereafter was able to recover over 65 per cent. of its non-nitrogenous constituents. The loss in cellulose was probably much less than that here indicated, for we have found that during the maceration of bran in the digestive tract certain portions become detached from the main flake and are with the greatest difficulty recovered.

III. Wheat bran contains a considerable but varying proportion of nitrogenous compounds, averaging, however, about 14

per cent.¶ This fact has permitted the continued existence of two widely-credited assumptions: (a) that this nitrogen exists in albuminoid combination, or, in other words, is in a nutritious form; and (b) that the proteid matter of wheat is contained almost exclusively in specific cortical cells of the grain,—the so-called “gluten cells.”

(a.) Nearly all the existing estimates of the proportion of proteids in food-stuffs are based upon the hypothesis that all of the contained nitrogen is present in some albuminoid combination. The percentage of nitrogen in a given food is therefore ascertained, multiplied usually by either 6.5 (Payen) or 6.33 (Ritthausen), and the result recorded as the percentage of proteid matter. It has lately been conclusively proved that nitrogen in non-albuminoid combination, *i.e.*, in compounds not capable of affording nourishment to any higher organisms, is present in many food-stuffs, and especially in those of vegetable origin. As a case in point may be mentioned the analyses of Wigner,** in which it is shown that, of the total nitrogenous matter of the entire wheat-grain, 87.9 per cent. is coagulable,—*i.e.*, distinctively proteid. Of the bran, only 42.4 per cent. of its nitrogenous compounds are coagulable, whereas in the flour 89.7 per cent. of these bodies come under the head of true proteids. Yet more marked instances of the inaccuracies attending the ordinary methods of estimating proteids have become evident in the course of researches by Schulze and Barbieri,†† who find that of the entire nitrogen of the potato but 56.2 per cent. enters into the composition of albuminoid matter, while in the fodder beet only 20 per cent. of its contained nitrogen is thus combined, the remaining 80 per cent. aiding in the formation of amides, nitrates, and ammonia. It is evident from these facts that estimates of the nutritive value of branny and other foods, based upon the percentage of nitrogen present, must be received with caution.

(b.) The term “gluten cell” is, through

* Journal of Physiology, vol. iv. No. vi., February, 1884, in the appended Proc. Physiol. Soc., session December 13, 1883.

† Nederl. Lancet, vol. vi. pp. 227, 244.

‡ Physiologische Chemie, p. 1024.

§ Comptes-Rendus, vol. xxxvii. p. 173.

|| See, also, Weiske (Centralblatt, No. 26, 1870), who finds that a small percentage of cellulose, especially when cooked, is dissolved in the human digestive tract.

¶ Dempwolf, Ann. d. Chem. u. Pharm., vol. cxl. p. 343. His figures, of interest here, are as follows. The amount of nitrogenous matter in the whole wheat was 14.35 per cent. The amount varied in the different grades of white flour from 11.01 to 15.56 per cent. The nitrogenous matter of the two grades of bran made from this wheat was respectively 13.93 and 14.06 per cent.

** Der æster. ungar. Müller, 1879, p. 52.

†† Quoted by Voit, Hermann's Handb. d. Physiol., vol. vi. p. 462.

a wide-spread misapprehension, applied to the cells constituting the fourth layer (Parkes) of the wheat-grain. These cellular elements exist usually in a single stratum as irregularly cuboidal bodies, in each of which, surrounded by a dense and laminated cellulose wall, are seen the semi-opaque granular contents. Upon the addition of reagents, especially in the form of caustic alkaline solutions, there is almost constantly noticeable a differentiation of the contents strongly suggesting the presence of a nucleus. Under these conditions, also, a coalescence of many of the individual granules forming the contents occurs with the formation of several highly-refractive spheroidal bodies, an appearance which has led Payen (as quoted by Dr. Richardson) to use the name *oléifères* as a synonyme for the cellular constituents of the fourth coat. The hypothesis that the cells of this layer are the chief gluten-bearers of the wheat-grain is usually attributed to Donders.* The return of bran to flour was at about the same period also advocated by Millon and Mége-Mouriès.†

From this time on, with but few dissenting voices, the "gluten cell" has been generally spoken of as the index of the nutritive nitrogenous matter‡ of the wheat-grain, while the central portion included within this layer, and constituting fully 80 per cent. of the grain, has been popularly regarded as being made up almost exclusively of cellulose and starch, and attempts have even been made to estimate the nutritive value of certain cereal food-stuffs by a microscopical determina-

tion of the proportion of "gluten cells" present.§

The manifest impropriety of such methods has of late been strongly emphasized by Prof. Richardson, of this city, and Prof. Leeds, of Hoboken. The credit of the first disproof of the exclusive limitation of gluten to the cells of the fourth layer is probably due to Schenk,|| who treated sections of wheat-grain with Millon's reagent, a pink coloration of the endosperm resulting. This coloration was most vivid at the periphery, indicating a gradual condensation of the proteid constituents of the grain as the cortex was approached. The same writer found "no coloration of the 'gluten cells' as a result of this reagent,"—an observation which we cannot confirm; for, apart from the readily demonstrable slight coloration of the contents of "gluten cells" after the application of Millon's reagent, it is more than difficult to conceive a cell, however specialized, which shall exhibit no proteid matter as a portion of its contents. Schenk also noted in artificial gastric digestions of sections of wheat that the starch-granules which (to a greater extent) fill the cells of the central portion of the grain, became detached, and from this fact deduced the just proposition that the starch-granules lay embedded in some albuminoid substance. In a study of the distribution of gluten within the wheat-grain,¶ the senior writer has described several methods for the ocular demonstration of gluten, in very considerable amount, in that portion of the grain included within the fourth layer, and entirely independent of the "gluten cells." The methods were as follows:

If whole wheat-grains be macerated in water to which a few drops of ether have been added to prevent germination, they will in a few days become thoroughly softened, and the contents of each grain may then be squeezed out as a white tenacious mass.

Examination of the remaining bran shows the "gluten cells" undisturbed, closely adhering to the cortical protective layers.

By now carefully washing the white extruded mass, the major part of the starch may be removed; and, upon the addition

* Nederl, Lancet, iv. 739; vi. 227, 244. Third Series, vol. i. 377.

† Comptes-Rendus, vol. xlv. p. 47.

‡ By general consent, the albuminoids of the wheat-grain are grouped together as gluten, which is, however, further separable into gluten-fibrin, gluten-casein, gliadin, and mucedin, proteid bodies practically equal in nutritive value, but differing in certain physical properties, notably that of solubility. It must therefore be borne in mind that in all methods of separating gluten from the other constituents of the grain, its (relatively small) soluble portion is removed with the starch, and that any estimate of the quantity of gluten based upon such methods will probably be below rather than above the actual amount. Ritthausen ("Die Eiweiss-Körper der Getreidearten," 1872) believes that a certain amount of true albumen should be included with the constituents of gluten just mentioned. An observation of Denis ("Mémoire sur le Sang," 1859), confirmed by Hoppe-Seyler (Med. Chem. Unters., 1867) and Weyl (Ber. d. Deut. Chem. Ges., xiii. 10, 1880), demonstrates that a portion of the proteids of the cereals exists in the form of a globulin. Thus the observer last named has shown that in wheat flour treated with a 15-per-cent. solution of sodium chloride, no formation of gluten occurs. We have found that bran, when macerated in 15-per-cent. salt-solution, yields a considerable amount of proteid matter precipitable by nitric and picric acids. We incline to believe, however, that this is not a true albumen. (See Vines, Journal of Physiology, vol. iii. p. 93.)

§ E. Cutter, M.D., Gaillard's Med. Journ., January, 1882. Anat.-physiol. Untersuch., p. 32, Wien, 1872.

¶ Randolph, Proc. Acad. Nat. Sci. Phila., December 11, 1883, p. 308.

of a drop of iodine solution, microscopic examination shows numerous net-works of fine yellow fibrils, still holding entangled in their meshes many starch-granules, colored blue by the iodine.

In carefully-washed specimens, the sponge-like net-works are seen to retain the outline of the central starch-filled cells, and evidently constitute the protoplasmic matrix in which the starch-granules lay. Upon gently teasing such a specimen under a moderate amplification, the fibrils will be seen to become longer and thinner, in a manner possible only to viscid and tenacious substances,—a class represented in wheat by gluten alone.

An eminently satisfactory proof of the proteid nature of these central net-works may be obtained by heating the specimen in the solution of acid nitrate of mercury (Millon's reagent), when the fibrils will assume the bright pink tint characteristic of albuminoids under this treatment. The results of the application of the xanthoproteic and biuret reactions are equally conclusive, but more care is required in the use of these proteid tests, and the resultant differentiation is not so clear. Reticuli, similar to those above described, but much broken and consequently far smaller, may be seen, upon close examination, scattered throughout fine white flour, without the use of any reagent.

In even the thinnest sections of the wheat-grain, the gluten of the central portion is always masked by large numbers of starch-granules. These may to a large extent be removed by immersing the section for a short time in liquor potassæ, with subsequent careful washing. The alkali affects the hydration and partial solution of the starch; but if its application be too long continued, the gluten will also be dissolved. This treatment is well adapted to show the rather dense gluten net-works usually found adherent to bran immediately below the fourth layer.

The most satisfactory method of studying the distribution of gluten in sections of wheat is that of artificial salivary digestion. If the section be gently boiled for a moment to hydrate the starch, then transferred when cool to filtered saliva, and maintained for from half an hour to an hour at a temperature of about 98° F., all the starch will be dissolved, while the insoluble proteid and other constituents will remain *in situ* and entirely unaltered. The

same result may be obtained from a somewhat more prolonged digestion of the unboiled section. The section of wheat-grain thus treated will exhibit throughout its entire central portion close-meshed gluten net-works, which become slightly denser towards the cortex of the grain. The proteid character of these reticuli is here, as in the first method, susceptible of micro-chemical demonstration. Upon the application of Millon's reagent to such a section, a relatively very faint coloration, indicating the presence of albuminoids, is noticeable in the "gluten-cells," while the gradual condensation of the gluten of the endosperm, as the fourth layer is approached, is evident even to the unaided eye.

The fact that the gluten net-works become denser towards the periphery of the endosperm, together with the presence of non-albuminoid nitrogenous compounds in the perisperm, explains the notable percentage of nitrogen found in bran as ordinarily roughly removed.

The small proportion of albuminoids present in the cells of the fourth layer, as evidenced by their feeble response to the proteid tests, together with the very considerable quantity of gluten which we have shown to exist in the central four-fifths of the grain (*i.e.*, the portion lying within the fourth layer), justifies us in the conclusion that by far the major portion of the nutritious nitrogenous matters exist in entire independence of the "gluten cells."

The difficulties which attend the complete isolation of these cells, however, have as yet rendered impossible any accurate estimation of the proportion of their proteid contents. Admitting for the moment that the "gluten cells" contain albuminoids in any noteworthy amount,* there are yet present conditions which seriously affect, if they do not entirely nullify, the nutritive efficiency of this portion of the grain.

The first of these conditions is the presence of the rough bran scales, which, by increasing peristalsis, so hasten the

* Apart from the statement of Schenk, above cited, the entire absence of gluten in the cells of the fourth layer has been latterly affirmed by Mège-Mouriès, who is quoted by Payen ("Substances alimentaires") to the effect that these cells are "filled with nitrogenous substances, of which gluten is not at all one." He finds the cells in question to contain, in addition to the salts of magnesium, lime, and potash, a peculiar diastatic ferment, cerealin, whose function is the transformation of the starch of the grain into dextrine and glucose for the nourishment of the germinating seed.

passage of the entire intestinal contents that complete digestion and absorption are prevented. The second is that, owing to the dense cellulose walls of the "gluten cells," their contents are practically unaffected by the digestive juices. The fact that the presence of branny scales in the digestive tract prevents the thorough digestion of the intestinal contents and induces the passage of fæces containing a considerable excess of undigested nitrogenous matter is fully attested by the observations of Meyer and Rubner.* Edward Smith† has also closely studied the economic phase of this subject, and reports most unfavorably upon the use of branny foods, stating that the diminished absorption of nutritive matters entailed by their use more than counterbalances the (apparent) gain in cheapness. Of interest in this connection is the observation of Fr. Hofmann,‡ who noted that the amount of fæces passed upon a meat-diet was remarkably increased by the addition of cellulose to the food taken.

The feeble response of the "gluten cell" to reagents and digestive juices has been noted by several observers. Thus, Donders§ states that these bodies are digested by the herbivora, but not by dogs or man. Similar results are recorded by Poggiale,|| and for domestic fowls by Meissner and Flüge.¶ J. Lehmann** records the feeding of pigs for thirty-two days on bran which contained almost no flour, with a nearly negative gain in weight, although the bran contained 15.5 per cent. of nitrogenous matters.

The ability of herbivora to digest "gluten cells" and similar bodies is probably due to the relatively powerful amylolytic ferments of their digestive fluids, for it has been demonstrated that pepsin is unable to traverse cellulose.†† It has also been shown by one of us‡‡ that the cells of the fourth layer are to all appearance entirely unaffected by prolonged artificial digestions,—salivary, gastric, and pancreatic,—and, further, that their contents were but little changed and their walls in

no wise disintegrated by immersion for some days in strong acids and alkalis.

Lately, however, in the course of an admirable paper upon the nutritive relations of gluten, Rubner§§ has stated that, although branny foods increase the amount of nitrogen in the fæces, fully three-fourths of the nitrogenous matter of bran is digested. In the bran used there was present 4 per cent. of nitrogen, "equalling 25 per cent. albuminoids," while in the bran obtained from the fæces of the persons under observation only 0.9 per cent. of nitrogen was obtainable. We hesitate in criticising the results of so able an observer, but it seems to us that there were two sources of error in this portion of his investigation. In the digestion of bran, the free adherent gluten, which properly belongs to the more central layers, is, of course, readily dissolved, with a consequent reduction in the nitrogen of the bran. Apart from this, however, a loss in nitrogen is to be expected from the diffusion of nitrogenous crystalloids; further, the "gluten cells" become so separated from the true bran during their maceration in the intestinal contents that it is nearly, if not quite, impossible to recover them.

In order to satisfy ourselves regarding the digestibility of the cells of the fourth coat, we have subjected bran with its adherent "gluten cells" to actual digestion by twelve well-nourished adults,—six males and six females. These twelve persons were selected from a larger number by excluding all whose fæces exhibited under microscopic examination any inefficiency in the amylolytic and proteolytic digestive ferments, as evidenced by the presence of starch or muscle fibre in more than a minimal amount. Sources of error arising from individual peculiarities having been eliminated by the number of persons under observation, and the best conditions for digestion having been obtained, these persons then received daily for three days, in addition to their regular food, one ounce of thoroughly-boiled bran. Their fæces for the last two days of the treatment were submitted to close microscopical examination, with results so nearly uniform as not to require tabulation. In every case the number of "gluten cells" present was more than sufficient to render a diagnosis of the food taken a matter of great

* Zeitschrift f. Biologie, vol. vii.; *ibid.*, xix., 1883, p. 46.

† "Foods," 1875, p. 175.

‡ Voit, Sitzgsber. d. Bayr. Akad., December, 1869.

§ Physiologie (German ed.), p. 273.

|| Comptes-Rendus, 1853.

¶ Zeitsch. f. Rat. Med., vol. xxxi. p. 185, and vol. xxxvi. p. 184.

** Amtsbl. f. d. Handl. u. Wer. d. Königr. Sachsen, 1868, No. 2.

†† Hammersten, Jahresber. d. Thierchemie, vol. iii. p. 207.

‡‡ Randolph, Proc. Acad. Nat. Sciences, 1883, p. 311.

§§ Zeitschr. f. Biologie, vol. xix., 1883, p. 46.

ease. In two-thirds of the cases no evidences of disintegration of any of the cells could be found upon repeated examination of many fields from each specimen. In four cases a small proportion (less than ten per cent.) of the numerous cells examined showed evidences of having been affected by the digestive process, the cell-contents having become lighter in color and less opaque. If, however, any true digestion of the cells had occurred, it is evident that many of these elements in different stages of disintegration would have been seen.

As a rule, we found that the several layers of the bran presented an appearance, not of having been digested, but simply of having been subjected to prolonged maceration. Thus, the three coats of the true bran, while entirely unchanged, were frequently found separated from each other. We had expected to find the fourth layer closely adherent to the third, as is the case in dry bran, but in the majority of specimens these two coats became separated, and occasionally large sheets of "gluten cells," to all appearances perfectly normal, were seen. As a rule, however, that portion of the fæcal mass representing the meal at which bran was taken* was found to contain these thick-walled cells in nearly every field.

A study of the nutritive relations of a

given food may be approached from three sides: First, from that of the exact chemical composition of the food, a knowledge absolutely essential to any scientific scheme of diet; second, from that of the various excretions of the individual or animal upon the diet in question; and, third, from the more clinical stand-point of study of the effects exerted by a given diet upon the growth and nutritive processes of the organism under observation. After an examination of branny food in the light of the first two methods, we attempted its study by the third. To this end, six young pigs of the same litter, and all in fair health, were weighed and placed under the same conditions, in pairs, in three separate bins. Those in the first bin daily received bread especially made from whole wheat-flour, in amount corresponding to one-fourth pound of dry bread each. To those in the second bin was given a corresponding amount of bread made from wheat whose three external coats only had been removed. The pigs in the third bin received the best white bread in amount corresponding to the standard above mentioned. A sufficient (fixed) quantity of water was given twice daily. The following table shows the weight of each pair at the beginning of the observation, and at the end of respectively ten and thirty-two days thereafter.

Bin.	Age.	Food.	Joint weight March 6.	Joint weight March 16.	Joint gain 10 days.	Joint weight April 7.	Joint gain 32 days.
	Weeks		Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
I.	6	Bread from whole wheat.	24.5	29.0	4.5	33.25	8.75
II.	6	Brown bread from decorticated wheat.....	24.75	28.25	3.5	34.50	9.75
III.	6	White bread.....	25.25	27.25	2.0	33.0	7.75

Comparison of these weights exhibits curious and apparently contradictory results,—viz., that during the first ten days the gain was greatest in the pigs fed upon whole-wheat bread, whereas at the end of thirty-two days of such feeding the gain was most pronounced in the pigs fed upon bread made from wheat whose three outer coats had been removed. The cause of this variation in results is not far to seek.

* We did not find it needful to give with the bran any coloring-matter to differentiate in the fæces the meal at which it was taken, as the scales of bran were always a sufficient index. When requisite, such differentiation may readily be obtained by the method of Cramer (Zeitschr. f. Physiol. Chem., vol. vi. p. 354) or that of Rubner (l. c.).

At the commencement of the experiments the animals were small, and the food given was in each case more than sufficient to replace the waste in both the tissues and the circulatory fluids. Even the pair fed upon bread containing the innutritious and waste-inducing bran digested and absorbed sufficient proteid matter to supply the needs of the tissues, and normal growth was also favored by the presence of a bulky intestinal contents of a mechanically stimulating nature, and also by the nutritive salts which were present in this bread in larger amounts than in the others. On the other hand, at the end

of the thirty-two days the animals had notably increased in size; the food given was then barely sufficient for the needs of the economy, and any conditions impeding its complete digestion and absorption produced a notable effect upon the rate of growth of these young animals.

It must be borne in mind that these experiments relate only to the value of the different breads when taken alone, to the exclusion of other foods. The experiments of Rubner before cited leave no doubt that a white bread contains more assimilable nutriment than does one made from the whole wheat; but this does not render it a desirable food-stuff for exclusive use. On the contrary, a weaned but still quite young omnivorous mammal thrives better upon an exclusive diet of bran bread than on white, and presumably because the earthy and alkaline salts are present in greater abundance in the former, and also because the indigestible constituents tend to give to the intestinal contents that bulk and consistence which are essential to the hygiene of the digestive tract. But, as has been shown by Edward Smith and others, the branny scales are needlessly irritating and unduly hasten the passage of food* but partially digested and absorbed. The end which popular hygiene attempts to effect by the retention of bran in breadstuffs can be better attained by other means. Thus, the nutritive salts of food so frequently lost in ordinary methods of preparation are readily restored by the concentration of the liquor in which meats and vegetables are cooked into a soup-stock, as is practised in almost every French kitchen. Again, the various fresh green vegetables used as salads yield in abundance these inorganic food-stuffs, the presence of which we have seen is indispensable to normal tissue-activity. A further advantage of these and other succulent vegetables lies in the fact that their cellulose, while efficient in giving proper bulk and consistence to the stools, is, as compared with bran scales, soft and unirritating to the digestive tract.

From these facts, old and new, which have been presented, the following deductions appear to us justifiable:

* An observation worthy of mention in this connection is that of Rubner, who finds that, while the presence of much woody fibre and harder cellulose in the intestinal contents induces the passage of stools containing an excess of undigested proteid foods, the absorption of fats under the same conditions is not materially affected.

I. The carbohydrates of bran are digested by man to but a slight degree.

II. The nutritive salts of the wheat-grain are contained chiefly in the bran, and, therefore, when bread is eaten to the exclusion of other foods, the kinds of bread which contain these elements are the more valuable. When, however, as is usually the case, bread is used as an adjunct to other foods which contain the inorganic nutritive elements, a white bread offers, weight for weight, more available food than does one containing bran.

III. That by far the major portion of the gluten of wheat exists in the central four-fifths of the grain, entirely independent of the cells of the fourth bran layer (the so-called "gluten cells"). Further, that the cells last named, even when thoroughly cooked, are little if at all affected by passage through the digestive tract of the healthy adult.

IV. That, in an ordinary mixed diet, the retention of bran in flour is a false economy, as its presence so quickens peristaltic action as to prevent the complete digestion and absorption not only of the proteids present in the branny food, but also of other food-stuffs ingested at the same time; and,

V. That, inasmuch as in the bran of wheat as ordinarily roughly removed there is adherent a noteworthy amount of the true gluten of the endosperm, any process which, in the production of wheaten flour, should remove simply the three cortical protective layers of the grain, would yield a flour at once cheaper and more nutritious than that ordinarily used.

BIOLOGICAL LABORATORY OF THE UNIVERSITY OF PENNSYLVANIA, May 31, 1884.

ETHERIZATION BY THE RECTUM —REPORT OF FOUR CASES BY YVERSEN'S METHOD.

*Read before the Philadelphia County Medical Society,
June 18, 1884,*

BY JOHN S. MILLER, M.D.

I DESIRE to report four cases of etherization by the rectum,—a method of producing anæsthesia first suggested by Dr. Axel Yversen, of Copenhagen.

These cases were in my recent practice; and to Drs. Louis Jurist and A. B. Hirsh I am indebted for assistance rendered, and for many of the observations made. In

two of these cases the mucous membrane of the bowel was prepared for its respiratory function, as it ought to have been in all, by a restriction of diet and the use of purgatives. No preliminary hypodermics were used. The method of administering the ether was simple. A definite quantity was placed in a bottle (only partially filling it), was vaporized by a water-bath at 120° , and the vapor conducted to the rectum by a rubber tube terminating in a recurrent catheter, the free or recurrent end being closed by pressure of the thumb during the inflation of the bowel; the expiratory act was performed by removing this pressure and removing the water-bath.

The first case was one for minor operation, demanding only primary anæsthesia. This patient had not been prepared, and sufficient precaution was not taken against the introduction of ether-vapor in too great a quantity, and of liquid ether, by an overboiling in the apparatus. Almost immediately he complained of burning and tenesmus, the abdomen became promptly and greatly distended, and there were colicky pains. In about one minute he noted the taste of ether. A portion of the vapor was allowed to escape, and no more was given. The pain ceased, intoxication soon began, and in six minutes he was sufficiently anæsthetized for operation. The pulse was full, and respiration was easy. Two minutes later he returned to consciousness, but seemed dazed. The struggling had been trifling. There was no vomiting, and no diarrhœa followed. One ounce of ether was used.

The second patient was an adult male, from whom I removed an exostosis of the vomer,—an operation requiring full anæsthesia. In this case a sufficient laxative had been given the previous night. Two hours before the operation he had been allowed an ordinary breakfast. This patient, too, experienced a prompt burning and discomfort in the rectum, but at no time great, and soon ceasing. Ether was tasted in about two minutes, and noted on the breath. The abdomen seemed distended, and some cramp-like pains were experienced. A considerable amount of vapor was then allowed to escape, with instant relief. After waiting two minutes without the development of further phenomena, a somewhat less amount of vapor was introduced, and (the catheter being withdrawn) was left for gradual absorp-

tion. The stage of excitement was short, marked by a pleasant delirium, and without motor activity. Full anæsthesia was obtained in eleven minutes from the first introduction of the ether vapor, and was perfectly maintained during the eight minutes of operation. Escape of residual vapor was secured by a gentle kneading of the abdomen and separation of the nates. The posterior nares not having been plugged, considerable blood regurgitated from the stomach after operation. This vomiting cannot with any certainty be attributed to the ether. No diarrhœa followed. An ounce and a half of the anæsthetic was used.

The third patient, also an adult, robust male, was subjected to acupressure of the internal saphena vein, with destruction by means of Vienna paste of several neighboring vessels,—an operation also requiring full anæsthesia. He had received a laxative the day before, and an enema on the morning of operation, and had taken a moderate breakfast. The sensation of warmth and tenesmus was immediate, but soon ceased. The abdomen became distended, and he complained of epigastric pain. A partial escape of vapor was permitted, and he had instant relief. A few minutes later the bowel was again inflated, and the tube withdrawn. Enough vapor remained after withdrawing the tube to produce complete anæsthesia in a total of fifteen minutes; and no further introduction was required to maintain it. There had been almost no stage of excitation, and that with no other phenomena than an immoderate laughing. He recovered promptly. No vomiting or diarrhœa followed. A little less than two ounces of ether were used.

The fourth case was that of a medical gentleman in good health, whose love of science led him to volunteer a passive part in these experiments. This time the bowel had not been prepared, although an ordinary movement had taken place five hours previous. On introducing the vapor, there was slight burning and tenesmus, but no cramps. Intoxication was soon induced, and the doctor seemed most of all to enjoy the proceedings. Pulse and respiration were normal. A lively peristalsis now put an end to this mode of administration, and terminated the experiment.

The only reason for quoting this case is the evidence it furnishes for the neces-

sity of preparing the bowel,—a necessity which excludes this method of etherization from our resources in accident and emergency cases.

This case completes the four, and I have had no other opportunities for observation.

Some question having arisen as to whether the vapor really does pass the ileo-cæcal valve, I deemed this a subject for legitimate vivisection, and, etherizing a cat per rectum, opened the abdominal cavity, and noted that the small intestine was as greatly distended as the large.

In this method of etherization the most obvious advantages are as follows:

1. Dyspnœa is avoided, and the patient is saved from the anxiety due to a sense of impending suffocation.

2. There is avoided the danger of simultaneous irritation of the superior laryngeal and pneumogastric nerves at the periphery, —these irritations neutralizing each other in the respiratory centre, and suspending respiration entirely.

3. The danger of asphyxia is lessened, —the patient not being drowned in his own mucus,—and the integrity of the pulmonary mucous membrane as an organ of gas-exchange is preserved. Of course some vapor finds itself in the lungs, and acts there as a local irritant,—elimination being by that channel. But the quantity is not great, and does not constitute a source of danger. In the cases reported, the increase in secretion was too trifling for discovery.

4. The stage of excitation is therefore not prolonged by the struggles for breath. In general it may be said that the delirium of any alcoholic intoxication is a pleasant and good-natured one, unless the patient is crossed,—as he certainly feels himself to be when a wet towel is pressed over his face.

5. Nourishment may be taken before operation, to sustain the powers of life and lessen the dangers from shock.

6. Return to consciousness is prompt,—this stage not being prolonged by carbonic-acid poisoning.

7. The anæsthetic seems as readily suspended as by the ordinary method,—the bowel being promptly emptied by gentle massage.

8. Economy in ether is an advantage hardly to be mentioned with more important considerations.

The more obvious disadvantages are—

1. The exposure of person required,—the abdomen being necessarily under observation, even if the catheter be inserted under cover.

2. More judgment and experience is required in the administration than by the ordinary method,—over-boiling in the apparatus, and too much distention, being both painful and highly dangerous. The warning to cease is sudden, and must be immediately obeyed.

3. Just as the other mode is inconvenient in oral surgery, so in perineal operations is the apparatus needed for this method in the way.

4. In abdominal surgery, or if there be marked intestinal lesion, this mode is contra-indicated.

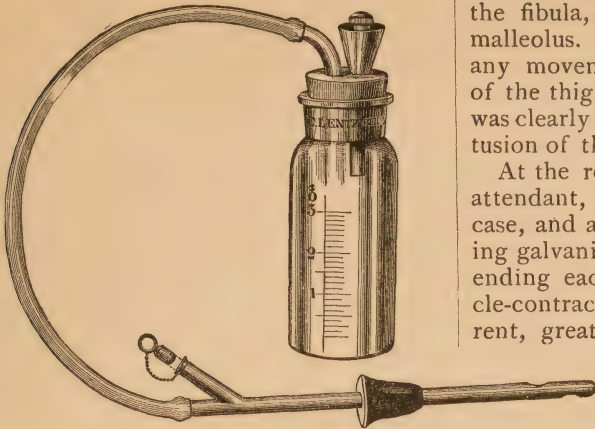
5. The inapplicability in cases of accident and emergency, when time cannot be allowed to prepare the bowel, has already been mentioned.

6. Diarrhœa has been noted in seven out of the thirty-seven cases on record, though in none of mine.

I believe this sequel is due to pre-existing intestinal lesion, to the lack of preparation, to a too great distention of the bowel, or to the accidental introduction of ether in liquid form. Furthermore, my method has differed from that of other experimenters in this respect, that, instead of allowing the vapor to remain indefinitely, I secured a constant change by using a recurrent catheter, and introducing a certain quantity, or permitting it to escape, as indicated.

Other points of advantage and disadvantage may occur in later experience and to other observers, and new dangers may be discovered. But I am convinced that this method is worthy of further trial, and will find its place in surgery, fulfilling its own, though not *all*, indications. Like all else in therapeutics, it must pass through the stages of bungling use, condemnation, and revival.

[Dr. Miller then exhibited a form of apparatus which he had had made by Charles Lentz & Sons, No 27 South Tenth Street, for this purpose. It consists simply of a water-bath, a graduated bottle provided with a funnel and valve for pouring in the ether, and a supply-pipe for conducting the vapor to the rectum. This tube terminates in a straight recurrent catheter, the exhaust-channel of which is controlled by



C. LENTZ, Phila.

a valve. The catheter is furthermore provided with a movable collar for pressure against the anus,—it having been found that the vapor tends to escape by the side of the tube.]

834 NORTH NINETEENTH STREET, PHILADELPHIA.

CASES OF TRAUMATIC SCIATICA ILLUSTRATIVE OF ITS RELATION TO HIP-INJURIES.

BY G. BETTON MASSEY, M.D.,

Electro-Therapeutist to the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases.

ON the 6th of January of the present year I was called in consultation to see an aged gentleman of this city who had slipped and fallen upon an icy spot of pavement just eleven days previously. In falling, he struck heavily on the left hip, and it was with difficulty that he arose and walked home, a distance of some four and a half blocks. His family doctor, a prominent physician of the city and an expert diagnostician, when called in, searched diligently for fracture, but could find none, notwithstanding the evident helplessness of the limb and the attacks of excruciating pain that was made worse by movement. At the time I was called in, the physician had about concluded that the pain must be imaginary.

On examination, the absence of any kind of fracture was apparent. The patient could lift the limb but a few inches from the bed. He was suffering from continuous and severe pain, felt most at points corresponding to the sacro-iliac notch of the affected side, the rear of the head of

the fibula, and the rear of the external malleolus. The pain was aggravated by any movement, but especially by flexion of the thigh and extension of the leg. It was clearly a case of sciatica caused by contusion of the nerve in falling.

At the request of the patient's medical attendant, I joined him in the care of the case, and applied the continuous descending galvanic current to the affected nerve, ending each sitting with a series of muscle-contracting interruptions of the current, great gentleness being required at first to avoid aggravating the pain temporarily. Good effect was manifest after the first visit, and eleven applications

sufficed to establish a complete cure, recent careful inspection failing to detect either awkwardness of gait or atrophy of the posterior muscles.

Case II. was that of a German woman, aged 73, the mother-in-law of a well-to-do iron-worker. The old lady had become estranged from her son-in-law's family and had gone to live with a son, who was apparently very poor and very mean. On the 15th of January, 1883, she fell on the ice, striking the right hip and fracturing the neck of the femur outside the capsular ligament. Two weeks elapsed before the son-in-law heard of the accident, and during this time the patient was totally without either surgical attention or nursing. On being called in, I found the limb one and a half inches shorter than its fellow, and greatly everted. At the seat of the injury the great trochanter was found lost in an abundant deposit of callus. No crepitus could be found. Great pain existed throughout the distribution of the large sciatic nerve, being especially felt in the peroneal and posterior tibial branches.

Considering the age of the patient and the attempt at union already made by unaided nature, it was deemed unwise to interfere with the broken bone: so remedial efforts were entirely directed towards the relief of the sciatica. A series of blisters were directed; chloroform injections made; various stimulating and anodyne liniments applied; together with the internal administration of opiates and sedatives; but I am bound to say the case seemed slowly to improve without being affected by any of these remedies. Electricity was not used, as the patient was

too far from my office to make it possible to apply it with sufficient frequency, and the friends declined to have her moved to a hospital. The pain continued over a year, in gradually-decreasing severity, and, though the patient has been able to walk with crutches now for some months, there is much atrophy of the muscles supplied by this nerve.

In addition to the cases detailed above, I find notes of four cases of traumatic origin among the large number of cases of sciatica treated by myself at the electric clinics of the Infirmary for Nervous Diseases.

Case III.—A healthy hod-carrier, of Irish birth, was sent from Dr. Wharton Sinkler's clinic November 16, 1881. Seven weeks before, while carrying his usual burden up a ladder, the right foot slipped on a stick and threw the thigh into extreme flexion. He immediately felt an acute pain at the point of emergence of the sciatic and following that nerve down the thigh and into the peroneal. It was sharp and pricking in character, and had remained continuously present since the accident, being worse at night. He was unable to walk more than a block at a time, and presented a gait markedly characteristic of sciatica. No atrophy was found. He was placed upon static electricity, positive sparks being drawn from the painful points and course of the nerve. After the fifth application it is noted that he was much better; after the twelfth, that he walks three miles to the hospital; and after the twenty-second application he was discharged cured.

Case IV.—A carpenter, aged 68, was sent from Dr. Sinkler's clinic September 29, 1880. A healthy man, eight months before admission he fell on the ice, striking the right hip. He was compelled to remain in bed six weeks, suffering from pain in the region of the small and great sciatics. His physician was uncertain whether fracture was present or not.

On examination, the gluteal and flexor muscles of the right leg were found much atrophied. He complained of great pain in the course of the right sciatic to the knee, and also in the distribution of the external peroneal. At times he felt some pain in the left leg. He was placed on the constant galvanic current thrice weekly. At the end of forty-two applications he is noted as entirely well.

Case V.—A man, aged 40, was sent from Dr. Weir Mitchell's clinic May 6, 1881. Four months before, he had fallen and dislocated his right hip. This was reduced shortly afterwards, and he remained in hospital eleven weeks, during which time and up to his appearance at the clinic he suffered from much pain throughout the sciatic distribution of that side. There was considerable atrophy of the buttock and limb, a difference of one and a quarter inches being found six inches below the trochanters. He was placed upon five-grain doses of iodide of potassium and the constant current thrice weekly. After thirty-five applications of the battery and considerable quantities of the iodide, it was found that the pain had ceased, but that some atrophy remained.

Case VI.—A porter, aged 39, was sent from Dr. Mitchell's clinic, June 20, 1881. Fifteen months before, he had been crushed between a platform and a moving car, fracturing the pelvis on the right side. At his first appearance at the clinic some crepitus was still present, and there was two inches shortening of the right leg. He complained of much pain in the region of the sciatic nerves of that side, which was increased by motion and exercise. He had been blistered and was taking five-grain doses of the iodide when sent to the electrical clinic. After twelve applications of galvanism, with some benefit, the summer vacation compelled a discontinuance, and he did not reappear in the autumn.

The obvious conclusions to be drawn from these cases are the following:

1. Surgeons called to cases of hip-contusion or suspected fracture should not fail to search for evidences of injury to the delicate nervous structures here situated.

2. If such evidences of nerve-injury are found, prompt and energetic measures of relief are indicated, the importance of which is emphasized by the complete and rapid recovery of the two cases which were treated early.

3. Of the four remaining cases, one was distinctly benefited and two were cured by more or less long-continued (one to five months) galvanic treatment. The fourth did not receive galvanic treatment, and was fully a year in duration.

TRANSLATIONS.

THE VIRUS OF TUBERCULOSIS, AND ITS COMMUNICABILITY.—In the proceedings of the Paris Academy of Medicine for May 2 there is a report presented by Dr. Hérard, in the name of a commission composed of MM. Laboulbère, Peter, and Hérard, in which a very fair exposition of recent views of the etiology of tuberculosis is given. The following abstract is from *La France Médicale*. In the report of the commission on the Portal prize, M. Hérard discusses two points,—the existence of a virus of tuberculosis, and the transmission of this virus. The existence of a virus was claimed to have been established by Martin's experiments, which showed that if tubercular matter be used for inoculation, the product obtained is indefinitely re-inoculable; whereas, if inert substances are used, only nodosities are obtained, which, although having the exact external appearances of true tubercles, are not susceptible of indefinite re-inoculation.

From these experiments, M. Hérard considers it finally established that tuberculosis is inoculable, specific, and virulent, because virus alone has the power of infinite reproduction. The discovery of Koch's bacillus has not yet definitely solved the question of the parasitic nature of tuberculosis, but it has established certain facts: first, the bacillus tuberculosis has certain well-marked characters by which it is recognized, the bacillus of leprosy alone bearing some resemblance to it; secondly, the bacillus is constant,—it is found in all tubercular products, though in varying quantities. Possibly, in the situations where the bacilli are less numerous, it is because they have been expelled, giving place to ulcerations or cicatrices.

The researches of Malassez and Vignal afford ground for believing that tubercles may exist without bacilli proper, their place having been taken by zoogloea. In subsequent experiments, it was found by these observers that in successive preparations sometimes the zooglœic masses, sometimes the bacilli themselves, would appear.

Graucher has recently reported a case of phthisis without bacilli in the sputa; but such cases are exceptional.

In order to prove conclusively that the bacilli are the cause of phthisis, it would be necessary to follow Pasteur's plan, by cultivating the bacillus, and see if the same results are obtainable by it as with the tubercular products themselves. Koch's experiments have been conclusive on this point, although other experiments, conducted in France, did not yield the same results.

The questions of the etiology and prophylaxis of tuberculosis remain for elucidation, though the search now going on will doubtless show conclusively the contagious character of tuberculosis.

With regard to heredity, it certainly exists; but does the patient inherit it as he does syphilis, or inherit simply a predisposition to contract the disease? The reporter believes this to be the more probable, and he claimed that it obtained a solid support in the experiments of Landouzy and Hippolyte Martin. Much yet remains to be studied, however, in order to decide this question positively.

A CAUSE OF HIGH TEMPERATURE IN HYSTERIA.—M. Du Castel reported, at a recent meeting of the Société Médicale des Hôpitaux, Paris, the case of an hysterical girl convalescent from an attack of sore throat, who displayed remarkable alternations of temperature. Several thermometers were employed, but they all showed high markings, although her general surface did not seem hot to the touch: one day the thermometer marked 48° C., and on another 73° C. (163.4° F.!). By carefully watching the patient it was found that she had learned the trick of lightly tapping the end of the thermometer, which caused the mercurial column to ascend as far as she wished.—*Revue de Thérapeutique Méd.-Chir.*, No. 11.

COMMUNICATION OF DISEASE BY INSECTS.—In a communication in the *Crónica Med.-Quirúrgica de la Habana*, Dr. Finlay states that he found that mosquitoes which had bitten a yellow-fever patient carried away with them the filaments and spores of a peculiar nature, which were especially found upon the proboscis. He thinks it fair to conclude that disease may be carried in this way, although he does not look upon it as the only method of communicating yellow fever.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 26, 1884.

EDITORIAL.

THE EPIDEMIC IN FRANCE.

ALL our exchanges, as well as the daily press, are devoting considerable attention to the epidemic prevailing in the south of France, which is probably genuine cholera, in spite of the asseverations of Dr. Fauvel to the contrary. In a communication read before the Academy of Medicine at Paris, in June, M. Fauvel, who is the Inspector-General of the Health Service, and who is universally recognized as an authority upon the subject, said that the present epidemic was not Asiatic cholera, but simply a prevailing bowel-disorder arising from local causes, due to an enormous collection of troops aggregated together under hygienic conditions which he could only designate as deplorable. This opinion was also expressed by a Committee of consultation on Hygiene, in a report to the Minister of Public Health. In reaffirming the opinion, M. Fauvel did not claim infallibility for his judgment, but expressed himself with much positiveness as committed to this view, —that the slow progress of the epidemic, the manner in which it had developed, and its evolution, are not in harmony with the hypothesis of Asiatic cholera, which commences with extreme violence, affecting many individuals, and propagating itself with great rapidity, so that the epidemic attains its maximum intensity by the end of a few days, after having attacked all the individuals susceptible to its influence. This is well observed on board of a ship, where in three or four days all who are capable of contracting the disease are affected and either die or get well, and, as those who recover acquire

immunity from further attack, the epidemic rapidly ceases. This is also usually seen in large cities invaded by Asiatic cholera. But the progress of the disease has been very different from this in Toulon. Under conditions most favorable for its development, its course has been slow, the mortality, at first small, has gradually increased, and the disease has not shown much tendency to spread to other cities, although the great exodus from Toulon must have disseminated the germs in every direction.

On the other hand, Dr. Robert Koch, from personal investigation at Toulon, declares that the disease is true cholera, and expresses the opinion that it will probably spread through Europe during the summer, although America may escape on account of its distance and absence of land communication, and its facilities for quarantine. In the view of Koch as to the nature of the disease the English papers coincide, and they declare that it was the French troop-ship *Sarthe* which brought the disease from Cochin-China to Toulon, the disease attacking first the marines and sailors.

Whatever opinion may be held as to the true nature of the epidemic or its original source, there will certainly be no dispute as to the unhygienic condition of the affected cities. The filth and absence of sanitary protection in the Mediterranean cities constitute a menace to health and a standing invitation to disease. Filth means disease, when interpreted in biological terms, and, where a favorable soil exists, the germs of disease, whether microscopic or ultra-microscopic, will not be slow in developing. If an epidemic, or a succession of epidemics, will teach this lesson to the health authorities on the Mediterranean or elsewhere, it will lead to an advance in State medicine which may eventually be worth all that it cost, in preventing future plagues.

The circulars recently issued by health

boards in New York, Philadelphia, and other cities may exaggerate the danger of a visit from the cholera to the United States, but if a cholera scare will lead to improved sanitation, and to increased activity of health boards in removing and abating nuisances, we shall be the gainers by it in the end. Without wishing to belittle the danger, we think, however, that the prospect is a remote one of having during this summer any great increase in the deaths from bowel-disorders, especially in this city, where the surroundings are clean and life usually temperate and well regulated.

In the last epidemic, of 1873, Philadelphia had only eight cases which might have been due to the prevailing poison, of which six recovered, and the two that died were not positively recognized as being true cholera, and may have been due to local causes. Pittsburg had four cases showing a contagious character, but an epidemic was prevented by the prompt action of the health authorities. As cholera is so clearly a preventable disease, we notice with pleasure that the gravity of the danger has been recognized by the government in sending instructions to consuls at European ports, and that the President has also issued a timely message, which we give on another page.

FUNERAL ETIQUETTE FROM A MEDICAL STAND-POINT.

IN cases of death from contagious disorder, public funerals are very properly forbidden by health authorities, although occasionally a "wake" is surreptitiously held, with its unfortunate but natural results; of this, however, we need not speak, as the wisdom of thus limiting infection is acquiesced in generally by intelligent people, and the law is usually obeyed. There are some minor infractions of the laws of health that should be mentioned, which physicians have repeatedly called attention to, but the higher laws of fashion and

custom appear to exert a preponderating influence. For instance, there are very few days in the year when delicate women can ride long distances in a close carriage, and then, reaching the cemetery, stand upon the damp, cold sod for a greater or less time during the final ceremonies at the grave, without physical injury to themselves.

A custom also to which especial attention should be directed, in order to have it changed, is that of men standing bare-headed in the open air, apparently indifferent to the burning sun of July or the cold winds of March, without regard to the season or the weather. Taking into consideration the associated conditions, the necessarily depressing influence upon the emotions of the sad duty which at the time is pre-eminent in the mind, the physical condition resulting from sitting in a cramped position during a tedious ride in a carriage, and the unaccustomed exposure to the weather, it is not surprising that cases of illness result from the removal of the head-covering, particularly in elderly people with an enfeebled circulation. On a hot day there is danger of producing, if not actual sunstroke, at least a congestion of the membranes of the brain which causes persistent and violent headaches, and to this ministers and those officiating are particularly liable.

Whether the day be hot or cold, wet or only windy, let the services be held at a place where the health of the attendants need not be imperilled; let delicate and weakly persons be restrained from riding to the cemetery and from standing on the damp ground; and especially let men obey common sense rather than custom, and keep on their hats when they risk a sickness by their removal.

When cremation becomes the universal method of disposing of the dead, of course the above remarks will have no application; but for the present, and probably for some time to come, there will be need

for physicians to raise a warning voice against these minor infractions of hygienic law.

AN OMISSION.

WE are reminded by the *Boston Medical and Surgical Journal* that the list which we recently published of remedies capable of contributing to the health and comfort of travellers is incomplete. We should have added a few catheters and some other surgical appliances. Those who have especial need for such instruments will probably not wait for our recommendation; but we can say that we quite agree with our distinguished colleague that their usefulness is at times beyond question.

NOTES FROM SPECIAL CORRESPONDENTS.

LETTER FROM VIENNA, AUSTRIA.

VIENNA is the most interesting of all European medical centres, and especially so to American students. This perhaps is as much owing to the novelty and pleasure of the life as to the unexcelled opportunities for study and observation. Probably some details of student-life may not be uninteresting to your readers.

In the students' quarter—in the Josephstadt, on the western side of the city—students can get rooms from twenty florins upward per month. Good rooms on the second or third *étage*, including light and attendance, are worth about thirty florins. When heat is also required, a fire can be obtained for a few cents in one of their curious porcelain stoves, with which each room is supplied. In winter-time, when a constant fire is necessary, the expense is about four dollars a month. All the American and nearly all the English-speaking students take their meals at the Reidhof. This is a famous restaurant, where a good dinner or supper, including a half-litre of beer or a quarter-litre of Austrian wine, can be obtained for about a florin. Another great rendezvous for Americans is a *pension*, or boarding-house, on the Schwartzspanier Strasse, about two squares from the Hospital. All the conversation at table is in German. In this way one can very readily, and indeed in a very short space of time, acquire a sufficient knowledge of colloquial German to get on very well. No one eats breakfast, the universal custom being to have simply coffee and bread in your room before starting out

for the day's work. The monetary unit is the Austrian florin or gulden, which is equivalent to about forty-two American cents; but it has a purchasing power fully equal to that of our dollar.

There is always quite a colony of American students in Vienna, numbering in winter from a hundred to a hundred and forty, and in summer about one-fifth of the former number. The majority remain but a few months, though many stay four years. They are respected by their fellow-students for their energetic, quick methods and steady work, and are also very much liked by the docents and teachers in the hospital, because of their liberality and willingness to pay well for instruction. Indeed, almost all the places in the more expensive classes—namely, those allowing special opportunities for diagnostic and operative work—are filled by Americans. Many of the special courses are given in English, for the benefit of the English-speaking students who do not know German. The fees for courses average about twenty florins. But the operative courses and the "touch" courses are much more expensive. Many of the operative courses cost fifty florins for six weeks' work, and some of the famous touch courses in gynæcology cost as much as fifty florins for six lessons of two hours each. These courses are especially prized, and the places in them are often engaged many months in advance. Most of the courses are limited by the University authorities to a certain number of men. Of late years, rich Americans have done what is called "buying up" a class. *E.g.*, a certain course is limited to ten men at twenty florins each: two men go to the docent and say, "We will pay you the fee for the ten men allowed in your class; but we will occupy less of your time and exclude any one else from coming into the course." Any one can readily see that this is equally advantageous both to the teacher and to the student. The former has less trouble and expends less time, and the latter has greater advantages for study and observation. All the teachers are very proud of their knowledge of English, and the way they air it is oftentimes very amusing.

In view of the protracted struggle to admit women into the Philadelphia County Medical Society, it may interest some of your readers to know that they have failed to gain any recognition in Vienna, and are only admitted into Prof. Späth's ward, and then only on a level with the German midwives.

Vienna is the Mecca of surgery, to which its votaries from all parts of the world journey to see the great master, Billroth. One would scarcely imagine the testy old gentleman to be the foremost surgical authority of his time. I went to call on him with some letters from friends of his in London, my object being to record my name in the "fremdenbuch," or visiting-book, and in order

that I might see him operate privately. The surgical clinics at Vienna are conducted by Albert and Billroth. Albert, though not so distinguished a man as his renowned colleague, is preferred by the students, because of his carefully-prepared lectures and his great pains to teach. Billroth frequently misses his clinics. The clinics are held in small amphitheatres, totally inadequate for the number of students who wish to see the details of the operations.

I know of no hospital in the world as large as the Allgemeine Krankenhaus, which has accommodations for over three thousand patients. Although there are other large hospitals in Vienna, this is the largest, the oldest, and the one which has made Vienna famous the world over. Probably no hospital drains so great an area of country and has patients of so many nationalities as this one. Certainly no other medical school has such a heterogeneous collection of students. The hospital is built in the form of a series of quadrangles, opening the one into the other. It is a very old building, and would hardly come up to the modern standard of hospital construction. All the patients wear a uniform, made of a blue-and-white checked muslin. In this hospital Billroth's clinic is the great centre of attraction. It commences each morning at 9.30, and continues until 1. All the instruments are hung around the railing in sets. There are a great many clinical assistants, who obstruct the view very much. In all the operations the greatest care is exercised to stop immediately all hemorrhage. Corrosive sublimate and iodoform are the favorite antiseptic agents employed, both as dressings and as disinfectants for the instruments.

The next most popular clinic is that of Neumann, the syphilographer. For five days in the week the clinic is confined to the male wards. On each Friday the clinic is held in the female ward. All the patients are nude, and are made to stand on revolving pedestals, and are each personally examined by every member of the class. One striking feature of them appeared to be the relatively large number of those who have the initial lesion about the mouth. Chancre of the lip, which is comparatively rare in this country, appears to be a very common site of inoculation in Vienna. A dozen naked men or women walking around among a class of forty or fifty students is a novel sight to an American. Owing to the laxity of morals in Vienna, syphilis is very prevalent. Next in order of popularity will come the clinic of Carl Braun. He is a very stout, slow-speaking German, beloved by all the students on account of his wit and affable manners and because of his readiness to explain all he can for them. In view of the aversion of Philadelphia obstetricians to washing out the uterus after the completion of parturition, it may be interesting to know that

after every confinement in Braun's wards the uterus is washed out with one or the other of the following preparations: one part to two thousand of corrosive sublimate; one part to twenty of carbolic acid; or a strong solution of permanganate of potassium. Each student in his ward, and each nurse before and after every examination, is compelled to disinfect his hands with one or more of these same solutions. During the last four months the death-rate in his own wards was six in a thousand.* The teachers of gynecæic surgery in Germany seem to lack the appliances and the instruments we are accustomed to, and apparently are behindhand as regards both the pathology and the remedial treatment of disorders of the female urino-genital tract, as compared with their English and American confrères. Next in order of importance is the clinic of Schrötter,—than whom there is probably no abler teacher of laryngology in the world, saving Morell Mackenzie, of London. He speaks English very well, and takes especial interest in American students. He has an invaluable aid to instruction in the person of an old woman whose throat is apparently made of cast iron, for she seems entirely indifferent as to what you do with it. Upon this living model all the diagnostic manipulations of laryngoscopic surgery are taught. Each student examines, under Prof. Schrötter's supervision, all the area possible to explore by the rhinoscopic or laryngoscopic mirrors. Schrötter's clinics last from 9 A.M. until 1 P.M., and the more advanced students act as clinical assistants. Probably in no other place in the world is it possible for a student to see and personally examine so many throat-cases. If space permitted, I might describe the other clinics in detail, but I will simply mention that of Kaposi, the successor of Hebra, with his famous clinic for diseases of the skin; that of Ultzmann, and his painstaking labors to instruct the novice in urinary pathology; and that of Nothnagel, with its carefully-conducted course on internal medicine. Abundant opportunities are to be had for laboratory-work in Vienna, and the amount of material for the study of gross and microscopical anatomy and pathology is simply enormous. As an example of the cheapness of material, let me instance a fact that came under my observation while there. A physician in Boston, wishing to make some sections of the temporal bone, sent to Vienna for fifty specimens. These were carefully packed and shipped to him at a cost of four dollars and a half, exclusive of freight. There are several well-known instrument-makers and surgical cutlers in Vienna, the best-known of whom is Reiner. Cutting instruments are very poor, but, on the other hand, special in-

* During the time that Dr. Elwood Wilson had control of the Philadelphia Lying-in Charity, the statistics, according to published reports, showed a death-rate of less than half of one per centum for a period of eighteen years.

struments are remarkably cheap. For instance, Reiner sells a case containing a head-mirror and band, six assorted laryngoscopic mirrors, with handle, and two *applicateurs*, for the remarkably cheap sum of six dollars and a half. The best-known optical instrument maker is Zeiss. But a man who makes equally efficient instruments at about four-fifths the price is Reiker: for instance, a microscopic stand with an Abbey condenser, three eye-pieces, a micrometer, a half, fifth, and ninth lens, and a tenth immersion lens (which have been examined by Dr. Formad, who pronounces them excellent examples of optical workmanship), was purchased at a cost of one hundred and two dollars,—or less than half what they would cost in Philadelphia. Books are cheap in Vienna, especially those published in Germany and England. I saw several standard American books for sale in the shops, among others the works of Agnew, Gross, and Cohen. All the books are sold at a very great discount from catalogue prices; and any one purchasing or importing medical books from Germany or Austria would do well to bear this fact in mind.

CHARLES MEIGS WILSON.

MEETING OF OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETIES.

THE NEW GRAND HOTEL,
SUMMIT, CATSKILL MOUNTAINS, July 18, 1884.

THE Seventeenth Annual Meeting of the American Otological Society took place here on Tuesday, July 15, and the Twentieth Annual Meeting of the American Ophthalmological Society on July 16 and 17.

Each Society was well attended, many of the members of the one belonging to the other. This is the second year the meetings have been held in this mountainous region, under the hospitable roofs of Captain Gillette,—last year at the Kaaterskill House, this year at the New Grand Hotel. Despite the cool weather, the house was well filled with guests. The Societies have always adopted the plan of meeting in a large hotel, where they all can find accommodations and where they become their own entertainers. The sociability of the members is thus increased, strict attention being given to the meetings, and free from the junketing and outside claims upon their time which prove a disadvantage to so many Societies.

Dr. J. S. Prout, of Brooklyn, the Vice-President of the Otological, presided, in the absence of Dr. C. S. Burnett, of Philadelphia, the President of the Society.

Dr. H. Knapp, New York City, read a paper on "The Indications for Opening the Mastoid Process," based on some recent observations.

Dr. W. W. Seely, Cincinnati, Ohio, read a paper on "The Treatment of Suppurative Otitis Media."

Dr. J. J. B. Vermyne, New Bedford, Massa-

chusetts, presented two papers, one on "Disease of the Ethmoid, the Consequence of Chronic Catarrh of the Naso-Pharynx, with Exophthalmus;" also one on "Myxofibroma, springing from the Basis Cranii, causing Blindness, and, Seven Years later, Complete Deafness, by Destruction of the Labyrinth."

Dr. C. A. Todd, St. Louis, Missouri, read a paper on "Necrosis of Right Labyrinth—Total Facial Paralysis on the Same Side—Partial Cure."

Dr. J. A. Lippincott, Pittsburg, Pennsylvania, reported "A Case of Mastoiditis Interna Chronica," and Dr. C. J. Kipp, Newark, New Jersey, one on "Tumors of the Auricle."

Dr. C. H. Burnett, Philadelphia, was represented by a paper on "Reflex Aural Phenomena from Naso-Pharyngeal Catarrh, with Objective and Subjective Noises in the Ears."

Dr. S. Sexton, New York City, read papers.

Dr. A. H. Buck, New York City, read two papers, one entitled "Remarks on the Use of Large Doses of Iodide of Sodium or Iodide of Potassium in Cases of Rapid Loss of Hearing supposed to be due to Syphilitic Disease;" the other was on "The Symptoms and Conditions which indicate the Advisability of perforating the Mastoid Bone."

New instruments were presented by several members.

The discussions were able and interesting, and the evening session continued to a very late hour, during which Professor Clark presented a paper on "The Methods of Hearing Noises obtained by Deaf-Mutes."

Dr. C. H. Burnett, of Philadelphia, was re-elected President, Dr. C. S. Prout, of Brooklyn, was re-elected Vice-President, and Dr. J. J. B. Vermyne, of New Bedford, Massachusetts, renews his duties, so ably discharged, as Secretary and Treasurer.

The American Ophthalmological Society convened July 16, twenty-eight members present.

The President, Dr. H. D. Noyes, of New York City, being in Europe, the Vice-President, Dr. W. F. Norris, of Philadelphia, presided. Dr. R. H. Derby, of New York City, Secretary of the Society for the past ten years, resigned, much to the regret of the members. Dr. O. F. Wadsworth, of Boston, Massachusetts, was suggested by him as his successor, and was elected.

Papers were read as on the printed announcement, and several others were presented at the time of meeting.

Dr. T. R. Pooley, New York City, read a report of cases of "Acute Dacryo-Adenitis."

Dr. C. S. Bull, New York City, presented a paper on "Cases of Restoration of the Eyelid by Transplantation of Flap, without a Pedicle, by Wolfe's Method," also one on "Oculo-Motor Paralysis of Central Origin."

Dr. G. C. Harlan, Philadelphia, had a communication on a "Case of Hysterical

Monocular Blindness, with Mydriasis and Bлеpharospasm."

Dr. E. Dyer, Newport, Rhode Island, presented a description of "A New Perimeter."

Dr. W. F. Norris, Philadelphia, reported cases illustrating "Hereditary Atrophy of the Optic Nerves—Two Cases of Orbital Tumor."

Dr. B. E. Fryer, U.S.A., Fort Leavenworth, described an interesting and successful case of "Skin Flap Transplantation, without Pedicle, to cover Eyelid after Removal of Epithelioma."

Dr. H. Knapp, New York City, reported cases of "Neuro-Retinitis with Fulminant Blindness, with and without Restoration of Sight."

Dr. H. S. Schell, Philadelphia, communicated a case of "Embolism of the Central Artery of the Retina," and Dr. Arthur Mathewson, Brooklyn, "A Case Illustrating the Natural History of Cataract."

Dr. H. Derby, Boston, called attention to the operation of "Iridectomy in Chronic Iritis."

Dr. W. W. Seely, Cincinnati, Ohio, gave his experience in "Refractive Cases."

Dr. A. Alt, St. Louis, gave a demonstration of microscopical specimens in reference to sympathetic neuro-retinitis produced in a rabbit's eye. Special cases were reported as follows: Dr. L. W. Fox, Philadelphia, offered the "Clinical History of a Case of Sympathetic Ophthalmia;" Dr. J. A. Lippincott, Pittsburg, reported two cases of "Orbital Abscess;" Dr. C. J. Kipp, Newark, New Jersey, a case of "Abscess of the Frontal Sinus;" and Dr. R. H. Derby, New York City, a case of "Gangrene of the Lid, with Subsequent Restoration without Plastic Operation."

Dr. W. S. Little, Philadelphia, reported a case of "Glioma of the Retina, Congenital, Double."

Dr. William Thomson, Philadelphia, made a partial report of the progress of the examination of the employes of the Pennsylvania Railroad as to their color-sense, acuteness of vision, and hearing.

Dr. S. J. Risley, Philadelphia, communicated the history of a case of "Refraction illustrating the Change from Hypermetropia to Myopia in a Few Years."

Dr. W. F. Mittendorf, New York City, reported a case of "Polycoria;" Dr. E. Hutchinson, Utica, New York, a case of "Plastic Surgery on the Lower Lid for Ectropion;" Dr. O. F. Wadsworth, Boston, Massachusetts, a case of "Optic Neuritis associated with Myxœdema;" and Dr. Ott, Cincinnati, Ohio, cases of "Foreign Bodies removed from the Vitreous by the Electro-Magnet."

Dr. Joseph Andrews, Staten Island, read a paper upon the subject of "Jequirity." The discussions on the paper were numerous and instructive.

The officers elected for the ensuing year were:

President.—Dr. William F. Norris, Philadelphia, Pennsylvania.

Vice-President.—Dr. H. Derby, Boston, Massachusetts.

Secretary and Treasurer.—Dr. O. F. Wadsworth, Boston, Massachusetts.

Several new members were elected.

As numerous applications for membership to the Society are being received, a change in the constitution has been made. To become eligible for fellowship now requires five years' practice in ophthalmic medicine and surgery, with satisfactory evidence of knowledge of the subjects, and compliance with the ethical rules of the Society.

The Society adjourned to meet in July, 1885, at a place to be selected by the Secretary.

W. S. L.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA NEUROLOGICAL SOCIETY.

A STATED meeting of the Society was held on Monday evening, April 28, the President, Dr. S. WEIR MITCHELL, in the chair.

Dr. J. HENDRIE LLOYD read a paper entitled

REPORT OF A CASE OF PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS WITH BONE-LESIONS.

Sarah C., æt. 17, was one of the first inmates of the Home for Crippled Children after its establishment by Mrs. Innes, in the early winter of 1883. The patient presented, when first seen, an appearance of great obesity. The fat was generally distributed to the face, neck, trunk, gluteal regions, arms (partial), and legs. Some of the muscles of the forearms were slightly wasted. The appearance was one of great robustness of health, and the accumulation of fat and general outlines of the figure were such as to suggest an overfed middle-aged woman, rather than a girl but half advanced in her teens. Upon closer inspection, there was discoverable a strange contrast to this appearance of health. It could be readily seen, then, that the patient was a complete cripple. So absolute was the loss of power that she either lay supine, or was propped with pillows in a large chair, the body spreading out, as it were, by the mere force of gravitation, and without muscular resiliency or the control of will-power.

The girl was, and now is, so helpless that it is impossible for her to assume the sitting from the reclining position; she cannot turn upon her side without assistance, and it is with the greatest difficulty that as she lies upon her back she crosses one leg over the other. She retains, however, some power in her arms, especially the forearms, and, although

these regions are evidently wasting, they alone seem to possess what fraction of power the girl can command, and with them she can sew, crochet, and do other work requiring skill and training.

The details of her condition are briefly as follows. The muscular system presents in many places marked enlargements. These are evident especially in the deltoid and lumbar muscles, and in the calf. The muscles in these regions have a dense, doughy feel, and are overlaid with subcutaneous fat, with which they appear so intimately connected that it is difficult to detect their exact limitations. They are very little, if at all, subject to the will, so that their passive condition and their envelope of mottled and lifeless-looking skin are very suggestive, to one who handles them, of some profound pathological change.

This pathological change has been demonstrated by the microscope, and is in accord with the classical description of pseudo-hypertrophic muscular paralysis. With the aid of the little instrument of Dr. Harte, of this city, specimens of the muscular tissue were taken from the lumbar region and the calf. Dr. William E. Hughes kindly prepared these for examination, by teasing them, as the fragments were too small for embedding and cutting. The specimen from the calf presented under the lens an interstitial hyperplasia, with granular changes in the muscular fibre, and a marked loss of striation. There was not any appearance of secondary fatty change in the connective neoplasm, which may possibly be accounted for by the teasing process. The specimen from the lumbar region was not, apparently, from the muscle, but was simply adipose tissue.

The reactions to the faradic current in the deltoid and calf muscles are very feeble. The reactions with sponges on the median and ulnar nerves of the forearm—the muscles of which are wasting—are about normal, or, at least, much more active than in the hypertrophied muscles. So, too, in the peronei. The reactions of degeneration to the galvanic current have not as yet been sought for.

The girl was weighed some months after her admission to the Home and after she had evidently lost much flesh, and turned the scale at one hundred and twenty-four pounds. When first admitted, it required the combined strength of two men to carry her up-stairs, and she, no doubt, at that time weighed considerably more. Her stature is not tall, and her age at that time was not seventeen. The measurements of her limbs are at present as follows:

Upper extremities.—Right arm, 12½; forearm, 9. Left arm, 13; forearm, 9.

Lower extremities.—Right thigh, 21; leg, 13½. Left thigh, 21½; leg, 13.

These figures show an increase of bulk during the last few months. The girl's mind is fairly bright. She is something of a giggler,

—simpering and foolish,—but her defects may be partly, at least, accounted for by lack of opportunity and education. She cannot be called a feeble-minded child. The patient's history is very obscure. Her mother "ran away with another man," as her brother explains in a letter, and she has passed her life in public institutions. This brother says he thinks she was always a cripple, but not so bad but that she could at one time walk. Her general health is excellent; she attempts to add constantly to her exuberant proportions with a vigorous appetite, and is now putting on fat. The heart and lungs are normal. She occasionally suffers pain from the spinal curvature, to which reference will be made in a moment. There is no evidence of heredity. She at one time menstruated very freely, and as often as every two weeks.

But, while the appearance of the muscles is so significant, there are changes in the bones of still greater interest, to which I desire to call your attention. These changes have occurred in the spine, and in the elbow- and knee-joints. The spine is in a state of constant scoliosis, with its greater convexity to the right. One year ago, this convexity could be thrown to the left by one attendant lifting the patient by the shoulders and another making pressure on the vertebræ. It would not remain thus, however, and was evidently uncomfortable to the girl.

The elbow-joint presents a unique appearance, which, so far as I am at present informed, has not been described in any other reported case of pseudo-hypertrophic muscular paralysis. It is exceedingly mobile, due apparently to an atrophy of the epiphyses of the bones. Thus, the joint can be bent backward at a marked angle, quite impossible when the olecranon and its opposing surface are intact. The attachments of the head of the radius and the upper end of the ulna are loosened, allowing a sort of wabbling and limberness in making pronation and supination. This preternatural mobility is increased by a somewhat similar condition of the head of the humerus in the glenoid cavity.

The wrist-joint, also, is not firm and stanch (depicted by Dr. Taylor). The chief defect of the knee-joints is an atrophy of the patellæ, which are not more than one-half their normal diameters.

In bringing this case to your notice I desire especially to call your attention to the fatty phenomena and to the bone-lesions. The literature of the subject presents nothing which has added much to the original description of Duchenne, supplemented by a few very thorough post-mortems,—especially of Eulenberg and Cohnheim. Duchenne said that the interstitial connective tissue proliferated with the production of fibrous tissue, and that this increase was associated with fat-vesicles; also, that the striation was preserved, but was very faint. He does not

ERGOT.—Of the physiological properties or therapeutical applications of ergot it has long been unnecessary further to speak. No drug has been more systematically studied by chemist or physiologist, and there is none whose exact place has been more definitely fixed in the medical practitioner's materia medica. Until within very recent date the pharmacy of the drug was, however, strangely neglected. Ergot is peculiarly a drug whose medicinal activity is affected by conditions of climate, soil, season of gathering, and the various contingencies liable to interfere with the successful gathering, drying, etc., of the crude material. It is well known that the chemical constituents on which its virtue depends are liable to extreme variations with the conditions indicated. Notwithstanding this fact, however, the pharmacist continued to manufacture the usual Galenical preparations after the usual formulæ. The consequence was that the activity of these preparations was liable to variation from year to year, and few practitioners but have been disappointed in results confidently looked for, through this cause. With a view to remedying this great evil, especially great through the liability of the failure of the preparation at times when the life of a patient depends on its prompt action, we several years ago succeeded, after the necessary scientific experimentation, in giving to the profession a constant preparation, under the name of *Liquor Ergotæ Purificatus*. This preparation was made to conform at all times to a fixed standard, and contained an unvarying percentage of those chemical principles on which physiological study has demonstrated the oxytocic properties of the drug to depend. The drug is also known to contain certain principles of a more or less poisonous nature. These were carefully eliminated from the finished preparation. The success of this venture at a preparation of ergot which should be scientifically correct, encouraged us to make similar preparations of vegetable drugs, to which we, for convenience, gave the generic name of "Normal Liquids," and the name of our *Liquor Ergotæ Purificatus* was made to conform to this nomenclature. We, therefore, now place it on the market as

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bring into prominence the fatty changes, which seem to be secondary to the hypertrophy of the connective tissue. Other writers, apparently following Duchenne, or perhaps not seeing cases in which fatty changes are prominent (for they are rarely as marked as in our case), have not discoursed much upon the phenomena of lipomatosis. Duchenne says "the subcutaneous tissue contains very little fat." Eulenberg, however, has brought these changes prominently forward, for in his monograph—founded upon his post-mortem researches—he says there is a great increase of subcutaneous fatty tissue, "most noticeable in places where nature has provided an abundant panniculus;" and, moreover, says of the intermuscular changes, that there is first a proliferation of connective tissue, which is transformed into fatty tissue. I think that our case is a striking example of this pathology.

The bone-lesions in this case are interesting in view of the tendency at present to connect bone- and joint-changes with diseases of the central nervous system. This speculation is not a new one, for it was a suggestion of Prof. J. K. Mitchell years ago—so he is quoted—that rheumatism may be of neurotic origin. Arthritis deformans has been recently attributed by Weber to a neurotic source, but the argument is largely from a therapeutic stand-point,—viz., as the disease does not improve on anti-rheumatic treatment, and does improve on general tonic and galvanic treatment, *ergo*, a neurotic origin. There are undoubted bone-lesions caused by disorders of the cerebro-spinal axis, as has been shown by Prof. H. C. Wood in a recent clinical lecture. He refers to bone-changes in insanity (especially dementia paralytica), in hemiplegia, and in locomotor ataxia. These changes are described as atrophy, hypertrophy, and inflammation. A true causative relation is shown, but we are wanting in an exact pathology as to what trophic centres, if any, are affected, and in what manner. Bone-lesions in pseudo-hypertrophic muscular paralysis have not been brought into any prominence in the investigations which I have consulted, and in many cases not even referred to. Scoliosis, which exists in one case, is mentioned by some and ascribed to the weakened state of the muscles,—no doubt a true explanation, but such changes as I have described in the elbow and knee appear to be unique.

As a possible explanation of these impaired bones, I am reminded of the dictum of Duchenne. It was not the belief of this great clinician that pseudo-hypertrophic muscular paralysis was at all identical with progressive muscular atrophy, or that it was of central origin. It seems probable that the case before us may be an expression of that faulty development which overtakes in some defective births all tissues, and that pseudo-hypertrophic muscular paralysis, associated as it often is with impaired brain- and nerve-func-

tion, may be but a form, in some cases at least, of congenital deficiency of developmental power.

Dr. CHARLES K. MILLS said that he had that day seen a case at the Philadelphia Polyclinic interesting in connection with Dr. Lloyd's remarks on bone- and joint-lesion originating from the nervous system. The case was that of a mulatto woman who is changing to a bronze color, and, in addition, the upper half of the body is affected with muscular atrophy. The joints, particularly the smaller ones of the right hand, are swollen, rigid, and painful; the hands were in a half-closed position. She had perverted sensation in her face, loss of the sense of taste, difficulty of swallowing, and could only open her mouth half-way, on account of the muscles of deglutition and mastication being affected. The case illustrated the connection between muscular degeneration and joint and other trophic affections.

Dr. N. A. RANDOLPH read

A NOTE ON THE BEHAVIOR OF HYDROBROMIC ACID AND OF POTASSIUM IODIDE IN THE DIGESTIVE TRACT.

I venture to present before the Society a brief note upon a subject not strictly neurological, but having direct bearing upon the relations entertained to the processes of digestion by two drugs which are of interest to the neurologist.

In a series of artificial digestions in which hydrobromic acid was present in the digestive mixture in amount corresponding to the therapeutic dose, I have noted:

(a) That salivary digestion was completely suspended; whereas,

(b) The peptonization of proteid food-stuffs was in no wise retarded, the variation from the normal, if any, being towards an acceleration of this process.

It is evident, therefore, that, other things being equal, the appropriate time for the exhibition of this drug is immediately upon the cessation of salivary digestion within the stomach, or, in other words, upon the first formation of free acid within that viscus.

Recent studies* have shown that the acidity of the gastric contents found even in quite early stages of digestion is not due to the presence of *free* acid; and the ingenious observations of Von den Velden† go far towards proving that the development of free acid within the stomach does not occur until from forty-five minutes to an hour after breakfast, and from one to two hours after dinner. These results were obtained chiefly by the use of methylanilin violet and tropeolin, bodies delicately responsive by color-change to the presence of free acid. There is little doubt in

* Deutsch. Archiv f. Klin. Med., xxiii. 369. See also Jahresbuch ü. d. Fortsch. d. Thier-Chemie, 1880, p. 302, and Danilewsky, Centrabl. f. d. Med. Wiss., 1880.

† Zeitschr. f. Physiol. Chemie, iii. 205.

my mind that hydrochloric acid is developed in the stomach at an earlier period than that above indicated, but it seems very probable that by immediate combination with albuminoid it loses somewhat its characteristic activity. This is illustrated by an observation made in the course of this study,—namely, that the addition of small amounts of potassium iodide to dilute solutions of acid albumen containing two-tenths of one per cent. of hydrochloric acid does not result in the liberation of iodine. The addition of the same amount of the iodide to the same quantity of an aqueous solution of hydrochloric acid of the same degree of activity results in an immediate liberation of iodine.

This interesting discovery of two stages of acidity in the gastric juice has, I believe, not yet been incorporated in the text-books. It serves to reconcile the contradictory opinions so frequently found as to the value to the economy of saliva as a digestive fluid, and explains the completely diverse results obtained by such careful workers as Frerichs* and Bidder and Schmidt.†

Besides an observance of the time-limitations just indicated, I would suggest the advisability of milk as a vehicle for the administration of hydrobromic acid. The curd thus formed is fine and flocculent, the mixture closely resembling buttermilk in taste and appearance, and in no wise suggesting medicine. I have taken as much as a tablespoonful of the dilute acid in a tumbler of milk without any repugnance. The milk used must be raw. With this, as with most other acids, boiled milk gives tough and bulky coagula.‡

As regards the exhibition of the iodide of potassium, the rationale of its time relations is altogether different. Although this drug is distinctly alkaline, its presence in a mixture of hydrated starch and saliva certainly does not suspend the action of the amylolytic ferment, nor, so far as I can determine, materially retard it.§ When, however, the iodide is added, even in very small amount, to a mixture of artificial gastric juice and egg-albumen or fibrin, the rapidity of peptone-formation, as determined by the nascent mercuric iodide reaction || or by the biuret reaction and control test, is greatly diminished. This result is not due to a slight diminution in the acidity of the solution, caused by the addition of an alkaline body, for the same effect is noted when the acidity of the solution is at once again brought up to the normal

degree. The pepsin is apparently but little, if at all, affected by the presence of the iodide, if we may judge by the indifference of ptyalin to the drug, and by the fact that quantities of the iodide corresponding to the maximal therapeutic dose neither entirely suspend the peptic activity nor induce greater retardation of the digestion than do much smaller quantities. A slight effect is exerted by the iodide upon the proteid food-stuffs, evidenced in an increased toughness produced in, e.g., fibrin, and, when the drug is abundantly present, in the acquisition by the albuminoid of a slight yellow tinge, due to staining by iodine, which is liberated by the free acid of the artificial gastric juice.

The most important factor in the delay of peptonization lies in the power possessed by potassium iodide, even in relatively minute quantity, of precipitating acid albumen in solutions which shall, after its addition, possess the normal degree of acidity of human or even canine gastric juice. The same may be said of potassium bromide and of several other analogous compounds. The precipitation effected by the iodide is so complete that when solutions of acid albumen are thus treated and filtered, the still acid filtrate yields no trace of proteid matter. This observation, which is doubtless old, though I have as yet been unable to find it recorded, tends to show that the time at which the administration of this drug is least liable to disturb digestion is either during or immediately after the ingestion of food.

There are several sources of error in attempts at deduction from the results of artificial digestion, as ordinarily performed. Thus, the continued activity of a digestive fluid is largely conditioned by the removal of the products of its action soon after their formation. This occurs in the living viscus, but not in the test-tube of the experimenter. The maintenance of the normal temperature of the active stomach is, of course, readily accomplished, but the conscientious imitation of other factors in the normal digestive process implies not only a constant mechanical intermingling of food-stuff and digestive fluid, but the continued addition of small amounts of the digestive fluid itself. I have nearly perfected an apparatus which in a large degree obviates the difficulties just cited.

In artificial salivary digestions are conducted in a thin tube of fish-bladder closed at one end, which is by mechanical means kept in gentle agitation. The contents of this tube are maintained at the proper temperature by a surrounding body of warm water, which is slowly but constantly changed. For gastric digestions the animal membrane is substituted by one offering equally great surface for dialysis, but resistant to peptic action. Despite, however, the inaccuracies attending existing methods of study, the follow-

* Wagner, Handwörterbuch der Physiologie, iii. a, 772.

† Bidder und Schmidt, Verdauung und Stoffwechsel, p. 27.

‡ Randolph: Verbal communication on differences between raw and boiled milk.—*Proc. Acad. Nat. Sci. of Phila.*, 1884.

§ Langley and Eves (*Journal of Physiology*, iv. p. 19) have shown that, although a distinctly alkaline medium retards salivary action, the presence of a proteid body in the digestive mixture will prevent this retardation.

|| Randolph: A Reaction common to Peptone and Bile-Salts.—*Proc. Acad. Nat. Sci. of Phila.*, 1884.

ing deductions from the facts, old and new, which are here presented, appear justifiable.

I. That the earliest production of free acid within the stomach is approximately three-fourths of an hour after a meal, its appearance being still further delayed by the ingestion of food in large quantity.

II. That hydrobromic acid is liable to impede the digestion of starchy foods when administered within the interval just named; and

III. That iodide of potassium should be given at such time and in such dilution that its absorption shall be complete before the appearance of free acid within the gastric contents.

Dr. FRANCIS DERCUM said he thought the suggestion of using milk as a vehicle for hydrobromic acid a very good one.

Dr. S. WEIR MITCHELL spoke of the utility of hydrobromic acid given with bromide of potassium.

Dr. E. T. REICHERT referred to the paper recently written by Dr. H. C. Wood, on the "Use of Hydrobromic Acid in Epilepsy." He said it confirmed the conclusions which he had come to in a paper on "The Physiological Action of Hydrobromic Acid," published some years ago. He believed that hydrobromic acid could be substituted for bromide of potassium, as it had the same physiological qualities as the bromide.

Dr. S. WEIR MITCHELL read a paper on

CEDEMA OF HYSTERICAL HEMIPLEGIA AND UNILATERAL SWELLING IN HYSTERIA GENERALLY.

Dr. CHARLES K. MILLS said he had seen similar cases to those reported by Dr. Mitchell, but had not studied them closely. In a case of hysterical epilepsy, with hemi-anæsthesia, etc., there was œdema of both limbs, but the swelling was most marked on the affected side and was chiefly below the knee. In another case recently seen at the Philadelphia Hospital, the swelling of the limb was very decided.

In some cases of hysterical paraplegia he had noticed these swellings, but had not made them a special study. He also referred to a case of hysterical contracture of the wrist with marked œdema.

Dr. SINKLER spoke of having seen a number of cases of slight temporary swellings of the limbs in hysterical women. He mentioned a case of this kind which he had seen at the Orthopædic Hospital. It was that of a woman whose hands, feet, and legs would become, at times, slightly swollen, but it was temporary, as it would entirely disappear.

RECTAL ANÆSTHESIA.—It is hinted by the *Medical Bulletin* that the idea of producing anæsthesia by the rectum is not "fundamentally" correct.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting of the Society, held June 18, 1884, the President, Dr. WILLIAM M. WELCH, in the chair, a paper was read by Dr. William S. Janney, reporting a case of

AMPUTATION OF LEFT LEG AND THIRD, FOURTH, AND FIFTH METATARSALS OF RIGHT FOOT.

Mr. C., a colored man, æt. 41, was admitted to the Surgical Department of the Philadelphia Hospital, December 26, 1883. He was a driver for the Messrs. Bumm, salt-merchants, of this city. He was exposed to the intense cold of the third week of last December. A few days before his entrance to the hospital, he noticed that his feet were swollen; he cut his shoes, and continued to work until the 22d. On the 26th, both feet were swollen, the left the most, with the characteristic appearances of gangrene. In a few days sloughing commenced, and charcoal poultices were applied. On the 9th of January the line of demarcation on the left ankle was evident. On the 16th of January the line was deeply cut, and had begun to form on the right foot from the second interdigital web backward to the base of the fifth metatarsal. On the 16th, the left leg was amputated four inches above the ankle-joint, by a double tegumentary flap operation.

The stump was dressed with carbolized oil, and syringed out with carbolized water 1-40 daily. The patient's general condition was bad.

At the end of the fifth day the wound was dry, and gangrene had destroyed half the upper and nether flaps. The mortified portion was cut off with scissors, and the edges of the flaps were approximated with wire sutures and straps of rubber adhesive plaster, which the intentional redundancy of the flaps permitted, the wound healing without accident.

The tissues of the right foot continued to slough. On the 6th of February it presented the following appearance: the third, fourth, and fifth metatarsal bones and their phalanges were completely denuded, except the tendons of the extensor muscles, which remained attached to their respective insertions.

In consultation with my colleagues, it was thought that no operation short of Chopart's would be likely to succeed, as the remaining integument and underlying tissues covering the first and second metatarsals and their phalanges were infiltrated and boggy, indicating a very low vitality.

Mr. C. was very desirous of having as much of his foot saved as possible, and with his approval I disarticulated the third, fourth, and fifth metatarsals from the tarsal bones, leaving an open wound, which was dressed the first twenty-four hours with carbolized oil.

Gangrene speedily appeared in the wound; a poultice of tar, iodine, and flaxseed was crowded between the gaping edges; in three days the wound was clean and full of granulations; the wound was then dressed with a solution of bichloride of mercury, 1-1000; straps of adhesive plaster were applied, so that the edges were gradually approximated. At present the left stump has healed entirely, except a slight break, through which a necrosed portion of the bone was removed; the right foot has healed; the foot is in the condition of slight varus, but is very serviceable; the man's general condition is good.

The internal treatment was quinine, iron, and chlorine-water.

Dr. JOHN S. MILLER then read a paper on "Etherization by the Rectum." (See p. 792.)

DISCUSSION.

Dr. O'HARA: I do not think I would use this method. I see no advantage in it over administration by the mouth. It involves more risks. The ether has to go through the portal circulation and penetrate in that way through the entire system. A good deal of local irritation will be produced, and the method might be followed by congestion of the bowel. For operations above the mouth and throat it may possess advantages of convenience over the ordinary method, but a case of hare-lip operation has recently terminated fatally.

Dr. LEVIS: I have had no experience in this method, but I have watched the progress of it. The main objection is the irritating quality of ether. Other anæsthetic vapors are not so irritating, and it might be well to try the action of some of these.

Dr. NANCREDE said: Although I have had no experience in the rectal method of inducing anæsthesia, yet I fully recognize that the ordinary methods of administering ether are unsatisfactory, and therefore I welcome the paper of the evening as a step in the right direction,—*i.e.*, the endeavor to discover some more satisfactory method of inducing anæsthesia. The rectal method, however, is infinitely less safe than by the mouth, one if not more deaths having been acknowledged in a few dozen cases,—probably less than twenty-five patients in all having been experimented on,—while about one death in twenty-three thousand is the mortality usually given for etherization by the air-passages. The rectal method evidently requires much more skill and special training than the ordinary method. Anæsthesia I always considered a dangerous state, and I think that the usual custom in our American hospitals of intrusting the administration of anæsthetics to the junior member of the house staff is a reprehensible practice. Instead of giving the anæsthetic into the hands of the least experienced resident, it should be intrusted only to the most experienced.

Dr. DAVIS: In etherizing there are two

things I am afraid of,—suffocation and collapse. The former is usually readily avoided by attention to the tongue and the use of a gag to open the jaws; the latter is more serious: it occurs most readily in strumous children. In the University clinic there are constantly being performed operations on just such cases,—resections and the like. In these strumous cases, particularly if the operation is a severe one, the depression is very marked. I have seen the temperature fall as low as 94°, recovery ensuing. If collapse threatens, the first thing to do is to withdraw the ether. If it is being administered by the mouth, this can readily be done, but not so if it is being given by the rectum. In one of the cases related by the author, anæsthesia continued for a time after the withdrawal of the anæsthetic; and this is just what is to be feared in this method of giving ether. If symptoms of collapse supervene, we cannot withdraw the ether from the bowel, and the anæsthesia must increase, with a possibly fatal result.

Dr. ALBERT H. SMITH: The cases offered by Dr. Miller are not sufficient to establish the advantage of this method. Perhaps in operations requiring but a few minutes the method may answer; but how about cases in which the administration must be kept up for an hour or more? Anæsthesia is always to be considered a dangerous condition, but there is no special danger in a short anæsthesia if the material used is pure and carefully used. I cannot see any advantage in the rectal method. There is a serious æsthetic objection to it. In operations about the mouth it may be convenient, but here we can use other anæsthetics. I do not think that there is any difference in the action of the ether in the two methods. The ether must always act through the nerve-centres. The difficulties of dyspnœa and irritation may be all avoided by the use of morphia hypodermically before the operation. In reference to the relative danger of ether and chloroform I may say that I have seen much more alarming symptoms from the former than from the latter. I have abstained from using chloroform in many cases, not because I thought it unsafe, but because I knew that if death occurred under its use the anæsthetic would be made to bear the blame, while if ether were used it would not be charged with the accident.

Dr. W. R. D. BLACKWOOD: To my mind the method is useless and objectionable. The mortality directly attributable to its employment is enough to prohibit the practice. I have no experience in the human subject yet, and would not have hereafter. I was asked to notice the subject in a medical journal, and made two experiments in order to learn something of the method. In one case the animal's abdomen was enormously distended, and the vapor *could not be removed* by simply affording free exit by a tube per anum, or by

auxiliary external pressure; the vapor undoubtedly got beyond the ileo-cæcal valve, and was retained. We know nothing about the ability of the rectum to absorb gases; that is not its function. We cannot control retained vapor in the bowel. The procedure is dirty, offensive to all, and unjustifiable. Like all new things, too many in the profession will run wild over this plan for a while, and then drop it for the last novelty, without regard for its utility or real worth.

Dr. MILLER, in closing the discussion, said: The design of this paper, which I had supposed obvious, is the contribution of certain data to the subject of rectal etherization, and a formulation of the more obvious advantages and disadvantages. The attempt to strike a balance of the same I deem as yet premature. The mechanical dangers of overdistention, the difficulty of emptying the bowel of vapor when a suspension of the anæsthesia is desired, and the greater caution needed in the administration,—all these points I had already mentioned in my paper.

There are only two points to which I would further allude,—viz.:

First, as to rate of elimination. This, taking place by the lungs, no matter how introduced, would be more rapid than when the agent is inhaled, inasmuch as by the new method the pulmonary mucous membrane is preserved intact, and therefore more capable of osmotic function than if bathed in mucus, as by the ordinary way.

A more serious objection has not yet been referred to,—one based upon theoretical considerations. The experiments of Paul Bert—now already classic—have demonstrated:

1. That the degree of anæsthesia depends not upon the absolute amount of the agent used, but upon the percentage in the blood, and therefore on the tension of the vapor in the *atmosphere inhaled*.

2. That the percentage needed to suspend respectively the functions of animal and organic life bear a definite ratio to each other,—a ratio constant for each of the known anæsthetic agents, and for each species of animal and for each human individual. All between the two percentages mentioned is termed the *manageable zone*.

3. That most, if not all, of the undesirable effects of an anæsthetic are due to leaving this zone.

4. That the greatest safety is therefore in mixing the gases beforehand,—as has long been done by Mr. Spencer Wells.

If, now, ether be given by the rectum, it will be readily seen that the gauging can only be by absolute quantity, and not by the percentage actually in the blood. We could never know how near this zone is to being exhausted. To my mind, this is the most serious objection that can be offered.

HENRY LEFFMANN, M.D.,
Reporting Secretary.

PHILADELPHIA CLINICAL SOCIETY.

A STATED meeting of the Society was held June 27, 1884, the President, Dr. HENRY BEATES, JR., in the chair.

Dr. G. BETTON MASSEY read a paper on "Traumatic Sciatica and its Relation to Hip-Injuries." (See p. 795.)

DISCUSSION.

Dr. E. E. MONTGOMERY inquired how many cells had been used in the treatment. He thought that, considering the usual obstinacy of the class to which the cases related belonged, due to the inflammation of the sheath of the nerve, the treatment had been satisfactory.

Dr. L. BREWER HALL related the details of a case similar to those described, which had been caused in a lady by a fall from horseback, alighting on the seat. The pelvis was fractured, and a long-continued sciatica supervened.

Dr. MASSEY, in closing the discussion, said that the number of cells used varied from twenty or thirty to fifty, the kind being the gravity-cell, which, owing to great internal resistance and the nature of the elements used, did not furnish as much current per cell as the zinc-and-carbon batteries charged with acid. The number used was largely regulated by the varying resistance of the skins of different individuals, some skins permitting a free flow of the current, while others presented an almost insurmountable obstacle. It is to be regretted that the inventors have not as yet presented us with an instrument that will conveniently inform the operator of the true amount of electricity passing at a given moment. An approximation, however, to accurate dosage may be made by including a galvanometer in the circuit, or even by observing the sensations of the patient. Since the date of these cases he had used the static form of electricity in many cases of ordinary sciatica, and found it at times quite as efficacious as galvanism, as well as more convenient.

TREATMENT OF FISSURED NIPPLES.

Dr. DU BOIS called attention to the value of balsam of Peru as an application for fissured nipples. It should be applied after nursing about four times daily.

A COMBINED CLINICAL AND TABLE MICROSCOPE.

Dr. HALL, on behalf of the Committee on Microscopy, presented an improved clinical microscope, which combined all the features of a clinical with those of an ordinary table-stand.

KOCH DECORATED.—From the daily papers we learn that Dr. Koch has been decorated by the French government for his studies in the causation of cholera.

REVIEWS AND BOOK NOTICES.

RECHERCHES CLINIQUES ET THÉRAPEUTIQUES SUR L'ÉPILEPSIE, L'HYSTÉRIE ET L'IDIOTIE. *Compte-Rendu du Service des Epileptiques et des Enfants idiots et arriérés de Bicêtre pendant l'Année 1882.* Par Bourneville, Médecin de Bicêtre, Dauge, Interne du Service, et P. Bricon, Docteur en Médecine. Paris, 1883.

A year or so ago we took occasion to speak in terms of well-merited praise of the yearly volume printed by the physicians of the Bicêtre as an annual report, a volume not financial or laudatory either of a board of managers or of a supervising Providence, like many of our annual asylum reports, but containing the record of good, downright, scientific work, besides giving an idea of the clinical scope of the year's labor in the wards.

The present number seems in no whit behind its predecessor, but we notice a change in the method of treatment at the Bicêtre in the great growth of hydro-therapeutics, over thirty thousand baths of various kinds having been administered during the year. About eighty pages of the brochure are occupied with a detailed discussion (chiefly reports of cases) of the water-treatment of epilepsy. In twenty-six of the fifty-two cases reported, the baths appeared to do good; in six cases the amelioration was very noticeable. The expensiveness, trouble, and slight utility of the method will, in our opinion, prevent its ever becoming a popular remedy in epilepsy.

A trial as to the value of the bromide of gold showed that in doses of ten centigrammes a day it had no appreciable physiological or therapeutic effect; nor was any better result arrived at in a prolonged study of the effects of magnets upon epilepsy.

A number of cases of various kinds are reported in the volume, much the most interesting being the account of two cases in which paraplegia developed during the protracted inhalation of bromide of ethyl for the relief of epileptic convulsions. The drug was apparently the cause of the paraplegia, from which the patients very slowly recovered.

THE MEDICAL DIRECTORY OF PHILADELPHIA FOR 1884. Edited by SAMUEL B. HOPPIN, M.D. Philadelphia, P. Blakiston, Son & Co., 1884. 12mo, pp. 205.

This often-needed work of reference contains a considerable amount of useful information in a small compass. In addition to the names, office-hours, and residences of physicians, the place and date of graduation are given, and a supplementary list, arranged according to streets and numbers, is appended, which is sometimes a great convenience. Lists of homœopathic physicians (with a similar street-list), also of graduates of eclectic, Penn. and Payne's Colleges, and of per-

sons practising medicine without diplomas who have registered under the ten-year clause of the Registration Act, lists of druggists and of dentists, and of veterinary physicians and surgeons (both alphabetical and street), are to be found, together with much other useful information with reference to hospitals, dispensaries, public institutions, and special relief.

The text of the law governing registration, the law governing the coroner, and the Anatomy Act, are also included in this book, to which the editor has evidently devoted much time and care, and which he has made a most useful little work.

AUSCULTATION, PERCUSSION, AND URINALYSIS: AN EPITOME OF THE PHYSICAL SIGNS OF THE DISEASES OF THE HEART, LUNG, LIVER, AND KIDNEYS. Edited by C. HENRI LEONARD, M.A., M.D., Professor of the Medical and Surgical Diseases of Women, and Clinical Gynæcology, Michigan College of Medicine. Illustrated. Cloth, 16mo, 166 pages, postpaid, \$1.00. Detroit, Michigan, 1884. The Illustrated Medical Journal Co., Publishers.

This little hand-book of physical diagnosis gives an acceptable outline of the physical signs of the diseases of the principal thoracic and abdominal organs, with brief references to histological and anatomical points, and details of examination, which will render it a very useful book of reference for the student. The chapter on urine-analysis is comprehensive, though brief. It was prepared expressly for the book by William H. Rouse, M.D., Ph.C. A chapter upon Bacteria, Bacilli, Micrococci, Vibriones, and Spirillum, with illustrations, completes the work, which appears to be concise, correct, and reliable, and will be appreciated by those who need it and who have not the time to consult the larger works.

MISCELLANY.

PROGRESS OF CREMATION.—There are a number of cremation societies in this country, but only one crematory, that at Washington, Pennsylvania, and the difficulty and expense of sending bodies to that place will prevent, for some time at least, any extensive adoption of this mode of disposing of the bodies of the dead. There is but little doubt, however, that the number of those who favor cremation instead of ordinary earth-burial is steadily increasing, and it will not be long before there will be other furnaces built. A few days since, a meeting was held in New York of those who favor cremation, and plans were suggested looking towards a popular subscription to secure money to build a crematory near New York. Boston and Philadelphia each have cremation societies, and before another year has elapsed will probably have crematories. The recent dis-

tinguished example of our own Professor Samuel D. Gross has certainly caused some to look with favor upon cremation who had been opposed to it hitherto.

The question is also becoming an important one in England, as there are many in that country who regard cremation as desirable both on sanitary and economical grounds.

The attitude of the courts on the subject becomes, therefore, of special interest, and we notice that an exhaustive opinion recently rendered by Mr. Justice Stephen, in a case before him, shows that cremation cannot be considered a misdemeanor under the common law of England.

The recorded cases, as Justice Stephen says, seem to declare expressly that every one is entitled to "Christian burial," and any other mode of disposing of the dead, according to a strict construction of the law, would appear to be illegal, but as cremation was not known in England at the time when these cases were decided, and as this mode was certainly not in the minds of the judges, he says that no special weight should be given to such words. Looking at the matter as a new question, and without prejudice, he decides, however, that cremation cannot be considered a misdemeanor until it is so declared to be by Parliament. He does not express an opinion as to the advisability or propriety of cremation.

He does, however, declare that any act of cremation under such circumstances as to make it obnoxious to the community or annoying would make the perpetrators liable to an indictment for a nuisance.

The case in question before him involved the points of cremation as a misdemeanor and the prevention of an inquest. In regard to the latter it will be readily seen that some complications might arise and justice be thwarted in criminal cases. In case of sudden death by poison, it would be impossible often to secure evidences of the crime, if cremation were allowable under all circumstances. Even where a certificate of death is required, this might be obtained by wrongful means and the body quickly burned, in which case justice might be absolutely defeated through the impossibility of obtaining such proof as the law demands in murder trials. It would also be possible for a person to disregard entirely the provision requiring a certificate of death and burn the body before the authorities knew of the death. In such a case he might make himself liable for a misdemeanor, but he would escape the greater danger of a trial for murder.

These considerations are important in determining what legislation, if any, is needful in the matter.

It must also be remembered that the authorities have no right to hold inquests in every case of death; it is only where there are suspicious circumstances attending the decease. Ordinarily a person might be said

to have the same right to cremation that he would have to ordinary burial.

In the English case just cited the person was tried on charges of being guilty of a misdemeanor in burning a dead body and preventing an inquest, but he was acquitted on each charge.

IMPORTANCE OF A PROPER DIET IN SUMMER-COMPLAINT.—In the summer diarrhœa of infants sometimes no good result can be obtained from the treatment until the diet is changed. In such cases, Mellin's Food, which is used and recommended by some of the best authorities on diseases of children, will be found to be nourishing, unirritating, and very acceptable to children.* Where milk diet is resumed, we have also used Lactopeptine, a combination of pepsin, pancreatin, ptyalin, and lactic and hydrochloric acids, which has proved a valuable aid in weak digestion, and often invaluable in the summer diarrhœa of infants.

THE PRESIDENT'S PROCLAMATION,—QUARANTINE OFFICERS AND THE PUBLIC WARNED TO VIGILANCE AGAINST THE CHOLERA.

WASHINGTON, July 19.

By the President of the United States of America :

A PROCLAMATION.—While quarantine regulations are committed to the several States, the General Government has reposed certain powers in the President to be used at his discretion in preventing a threatened epidemic.

Feeling it my duty, I hereby call upon all

* A recent analysis of Mellin's Food by Prof. Fresenius, of Wiesbaden, gave results as follows:

The preparation is a moderately fine, yellowish-white, hygroscopic powder. It is not completely soluble in water, but is almost completely so—with the exception of a trace—in the stomach. The constituents are as follows :

I. Soluble in water :	
Non-nitrogenized, organic.	
Maltose and dextrose (33.46+35.92).....	69.38
Nitrogenized, organic.	
Albumen (2.13), peptone (0.87), amides (1.69)....	4.69
Inorganic	4.23
	78.30
II. Insoluble in water, but almost completely dissolved in the stomach :	
Non-nitrogenized, organic.	
Fat (0.08), cellulose, etc. (3.10).....	3.18
Nitrogenized, organic.....	5.06
Inorganic	0.14
	8.38
III. Water, including loss by drying at 120° C...	13.32
	100.00

As a matter of analytical interest, it may be added that the albuminoids were determined by Prof. Fresenius in the following manner: The albumen is calculated from the nitrogen of those nitrogenized substances which are precipitable by cupric hydrate in a solution containing a slight excess of acetic acid. The calculation is made by multiplying the nitrogen with 6.25. The peptones are found in a similar manner by calculation from the nitrogen obtained from the precipitate produced by phosphomolybdate of sodium in the filtrate from the preceding operation, after acidulating with hydrochloric acid. The amides result from the difference of the sum of nitrogen of the protein bodies, peptone and that obtained from the nitrogenized substances insoluble in water on the one hand, and the total nitrogen on the other hand. Of the 9.75 per cent. of nitrogenized constituents, only 0.2 per cent. were found to be insoluble.—*American Druggist.*

persons who, under existing systems in the several States, are intrusted with the execution of quarantine regulations, to be diligent and on the alert in order to prevent the introduction of the pestilence, which, we regret to learn, has made its appearance in some of the countries of Europe between which and the ports of the United States intercourse is direct and frequent.

I further advise that the cities and towns of the United States, whether on the coast or on the lines of interior communication, by sound sanitary regulations and the promotion of cleanliness, be prepared to resist the power of the disease and to mitigate its severity.

And I further direct the consuls of the United States in the ports where the pestilence has made or may make its appearance to exercise vigilance in carrying out the instructions heretofore given, and in communicating to the government of the United States any information of value relating to the progress or treatment of the disease. Given under my hand and the seal of the United States, at the city of Washington, this nineteenth day of July, in the year of our Lord one thousand eight hundred and eighty-four, and of the Independence of the United States the one hundred and eighth.

(Signed) CHESTER A. ARTHUR.

[SEAL]

By the President,

FREDERICK T. FRELINGHUYSEN,
Secretary of State.

THE Fifty-Seventh Congress of German Naturalists and Physicians will be held this year at Magdeburg, from the 18th to the 23d of September. The programme has been published by the committee, Drs. Gähde and Hochheim. Of the twenty-four sections into which the Congress will be divided, we observe that those upon medicine are particularly full as to promised communications. The official invitation and programme, containing extended details of the proceedings both in the Sections and in the general sessions, will be sent to any physician who has not yet received one, if he will send a postal card communicating the fact, addressing it to the Naturforscher Versammlung, Magdeburg, Germany.

NOTES AND QUERIES.

THE BERLIN POLICLINIC.

In a communication which has just been received by us, signed by Dr. Ludwig Loewe, of the Berlin Policlinic, some items are contained which will interest those who expect to visit Europe and improve part of their time by study.

In all the special courses of the Berlin Policlinic with practical clinical instruction the classes will be limited to six participants. Where there are more than six applicants for such a course, there will be formed a parallel course. For those who wish more thorough instruction, opportunities are offered to serve as assistants. The object being to make the Berliner Policlinic an institute of an international character, the privat-docenten will conduct courses in foreign languages, and places as assistants will be given to physicians of other

countries, the term of appointment being for three months. New courses begin with the first of each month, and continue daily, except Sunday, until the end of the month.

The new arrangements will give satisfaction, and will prove very convenient for those whose stay must be short and who wish to make the most of their time. After serving as assistants for a term, the foreign physicians, in especial cases, will be allowed to carry on parallel courses of their own.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 6, 1884, TO JULY 19, 1884.

PROMOTIONS (to date from July 2, 1884):

GLOVER PERIN, to be Assistant Surgeon-General, with rank of Colonel.

ANDREW K. SMITH, to be Surgeon, with rank of Lieutenant-Colonel.

PASSMORE MIDDLETON, to be Surgeon, with rank of Major.

CLEMENTS, B. A., MAJOR AND SURGEON.—Also directed to relieve Surgeon J. P. Wright of his duties as Acting Medical Director Department of the Missouri. Paragraph 1, S. O. 138, Headquarters Department of Missouri, July 8, 1884.

WRIGHT, J. P., MAJOR AND SURGEON.—Assigned to duty as post surgeon, San Antonio, Texas. Paragraph 4, S. O. 87, Headquarters Department of Texas, July 14, 1884.

McELDERRY, HENRY, CAPTAIN AND ASSISTANT-SURGEON.—From Department of the Platte to Department of the East. Paragraph 12, S. O. 165, A. G. O., July 16, 1884.

EWEN, CLARENCE, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon, Fort Sidney, Nebraska. Paragraph 8, S. O. 58, Headquarters Department of Platte, July 11, 1884.

ELBREY, F. W., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence still further extended six months, on surgeon's certificate of disability. Paragraph 6, S. O. 161, A. G. O., July 12, 1884.

PROMOTIONS:

To be Assistant-Surgeons, with the rank of Captain, after five years' service, in accordance with the Act of Congress of June 23, 1874:

Assistant-Surgeon JOHN J. KANE, June 3, 1884.

Assistant-Surgeon JOHN M. BANISTER, June 3, 1884.

Assistant-Surgeon AARON H. APPEL, June 3, 1884.

Assistant-Surgeon CHARLES RICHARD, June 3, 1884.

Assistant-Surgeon W. FITZHUGH CARTER, June 3, 1884.

BIRMINGHAM, H. P., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—From Fort Bayard, New Mexico, to Fort Bliss, Texas. Paragraph 3, S. O. 137, Headquarters Department of Missouri, July 3, 1884.

WAKEMAN, WILLIAM J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort D. A. Russell, Wyoming, and assigned to duty as post surgeon, Fort Washakie, Wyoming, relieving Assistant-Surgeon Norton Strong. Paragraph 9, S. O. 58, Headquarters Department of Platte, July 11, 1884.

APPOINTMENT:

CHARLES B. EWING, to be Assistant-Surgeon, with the rank of First-Lieutenant, July 5, 1884, vice Middleton, promoted. Memo., A. G. O., July 14, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM JULY 6, 1884, TO JULY 19, 1884.

P. A. Surgeon G. P. LUMSDEN, ordered to U.S. steam-ship "Wyandotte."

P. A. Surgeon R. C. PERSONS, detached from "Wyandotte" and placed on waiting orders.

Medical Director A. L. GIRON, ordered as member of Board of Inspection.

P. A. Surgeon R. C. PERSONS, ordered to U.S. steam-ship "Saratoga."

P. A. Surgeon C. A. SEIGFRIED, detached from U.S. steam-ship "Saratoga," ordered to Naval Hospital, Brooklyn.

Assistant-Surgeon J. S. SAYRE, ordered to U.S. steam-ship "Independence."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, AUGUST 9, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON CANCER OF THE PYLORUS, WITH DILATATION OF THE STO- MACH; AND ON FIBROID THICK- ENING OF THE CARDIAC EX- TREMITY OF THE STOMACH, PRODUCING OBSTRUCTION.

Delivered at the Hospital of the University of Pennsylvania

BY EDWARD T. BRUEN, M.D.,

Demonstrator of Clinical Medicine, and Assistant Physician.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—This is a new patient, and I am glad to have the opportunity of bringing him before you, as he illustrates the second stage of the disease of which I was speaking two weeks ago,—viz., cancer of the pylorus. The important points in this man's history are the following. He is an Irishman, 55 years of age; has been a miner, and has always used alcohol freely. The family history is negative. Previous to five months ago, he enjoyed good health. At this time, without any apparent cause, he began to experience dyspeptic symptoms. The important point to be noted is that these symptoms appeared without any change in his habits of living, and while he was taking his usual diet. These dyspeptic symptoms rapidly increased, and vomiting was associated with them. The material vomited was intensely sour and bitter, and was occasionally mixed with coffee-ground material. The time at which vomiting occurred was variable, from half an hour to two hours after eating. He has rapidly lost flesh, losing within the last five months at least thirty-five pounds. There has been no pain in connection with this trouble, so that the totality of the symptoms are dyspepsia, vomiting, and loss of flesh.

Let us study his present condition. The appearance of the tongue is good. The abdomen is scaphoid. In the right hypochondriac region I find a tumor about as large as a chicken's egg, which is movable and can be dragged as low as the umbilicus. It is important to note that the tumor is so movable, for, as you will remember, I made a point of this last week in differentiating between cancer of the

pylorus and cancer of the gall-bladder. This mass can be pushed to the right of the umbilicus. This examination gives no pain. Percussion reveals clear tympanitic resonance over the left hypochondrium. This tumor is, in all probability, connected with the stomach, for, although there is no special tympanitic sound characteristic of the stomach, yet this viscus, being larger than the other abdominal viscera, gives a fuller tympanitic note. Further, as this is the position of the fundus of the stomach, it is fair to conclude that the resonance is due to the presence of air in that organ.

With these points, let us see at what diagnosis we can reach. It is obvious that, in all probability, we have to deal with a malignant growth. The history is rather characteristic of an affection of this nature,—viz., the dyspepsia commencing without obvious cause, vomiting, and the throwing off of coffee-ground material, the rapid loss of flesh, and the appearance of a tumor. There is, however, one affection which we should consider in this connection, and that is thickening of the pylorus. This sometimes occurs, especially in those who have been addicted to the use of alcohol. Under such circumstances, the muscular tissue around the pylorus increases in amount, giving rise to a perceptible thickening and producing obstruction of the pylorus. In this particular case the diagnosis is not difficult. The history, with the symptoms which I have named, points clearly to a malignant formation. Another point which favors this idea is the size of the tumor, for in fibroid thickening the growth rarely reaches a considerable size.

Are there any other conditions to be considered? One is the possibility of the existence of an ulcer. The only thing in favor of an ulcer in this case is that there has sometimes been vomiting immediately after food has been taken into the stomach. In the digestive process, about two hours after the ingestion of food there is a tendency for it to pass into the duodenum, but in cancer of the pylorus this is resisted and emesis occurs. I think that the reason that vomiting occurs so soon is because there coexists considerable pyloric obstruction and dilatation of the stomach, which I think has been a marked feature from an early period in this pa-

tient's case. The dilated stomach, always containing partially-fermented food, is in a rebellious condition, and the moment food is taken irritation is produced, and vomiting quickly follows.

You must recollect, however, that there are other causes of dilatation of the stomach besides malignant disease of the pylorus, for it is necessary to have all these things in mind in studying the case. Sometimes the pylorus is obstructed and the stomach dilated from non-malignant thickening. At other times the pylorus may be obstructed from tumors outside of the organ pressing on it. There is no evidence of this in the present instance. The stomach is sometimes drawn down by adhesions, the displacement causing obstruction at this point. Occasionally, simple ulcers occur in the neighborhood of the pylorus, producing inflammatory thickening, which is followed by dilatation. There are one or two other causes of dilatation of the stomach of still more importance, such as chronic dyspepsia, connected with recurrent attacks of gastric catarrh. It is also possible in consequence of a debilitated habit, either from the general atrophy of the muscular tissues of the stomach, or from nervous paresis. I might in this connection allude to those rare cases in which acute dilatation of the stomach has occurred in a few days from paralysis of the splanchnic nerves following blows on the stomach. All these conditions can be easily excluded in this case.

How about the hemorrhage? The coffee-ground matter has been noticed only occasionally. In scirrhus of the pylorus—and cancers in this situation are usually scirrhus—there is simply a thickening beneath the mucous membrane; there is not often ulceration of the walls of the stomach, and when bleeding occurs it is generally due to venous congestion, the occasional rupture of a distended vein being the cause of blood appearing in the matters vomited. In the present case, the distention of the superficial abdominal veins points to obstruction of the deeper mesenteric circulation. In other forms of malignant disease, where the growth is fungous, covering a large portion of the wall of the stomach, the ulceration sometimes opens a blood-vessel, causing bleeding. Hemorrhage is, therefore, more frequent in other forms of malignant disease of the stomach than it is in the scirrhus variety.

This patient has had another prominent symptom, and that is constipation. This is a common symptom in cases of scirrhus of the pylorus. It is explained by the difficulty of food of a mixed character passing through the pylorus, and the necessity of living upon a liquid diet, which, although nutritious, yields but little waste. Wherever you find obstinate constipation, dyspepsia without cause, and loss of flesh, you may expect soon to see the final evidence of the affection in the appearance of a tumor.

There is another important matter to be considered in this case, and that is, whether or not there is secondary disease in any other organ. The organ to be examined most carefully is the liver, for, in about three out of four instances, cancer of the liver is secondary to cancer of the stomach. There is no pain over the liver, and the organ is not enlarged. We may, therefore, exclude malignant disease of this organ, for this is always accompanied with enlargement. Other points against the involvement of the liver are that there is no jaundice and there is absence of intestinal indigestion. This, added to the fact that the stools do not present the peculiar shiny appearance which is seen in affections of the pancreas, negatives disease of this viscus. Besides, there is no tumor lying across the abdomen in the position of the pancreas. We should, therefore, conclude that we have the disease probably limited to the pylorus, and that this has produced such obstruction as to be followed by great dilatation of the stomach. The rapid emaciation is dependent very largely upon the dilatation of the stomach and the inability to assimilate food.

When admitted to the hospital, the man said that he had been vomiting all the time. Under these circumstances, there were three things to be done. In the first place, we tried regulation of the diet. There are two kinds of food which might be suitable. We should, of course, begin with milk, as this is the most nutritious food that we can give. About two ounces of milk and lime-water should be given every hour and a half. Where this does not answer satisfactorily, the milk may be partially digested by adding three or four grains of pancreatine and ten grains of bicarbonate of sodium to a quart, allowing it to remain for about fifteen minutes at a

temperature of 80° . It should then be placed at a temperature of 40° . This arrests the process of fermentation and keeps the milk sweet until it is required. In this case it has not been necessary to digest the milk.

In some of these cases of dilatation it is necessary to suspend the administration of milk or starchy food, and to feed the patient exclusively on broths in small quantities. If these plans had not succeeded, we should have had to use certain medicines, and these are few in number. It might have been sufficient to use soda, or, what is better, bismuth, to obviate the acid condition of the stomach. Nitrate of silver may be used in conjunction with the bismuth with advantage. Ten grains of bismuth, with a pill of one-sixth of a grain of opium and one-twelfth of a grain of nitrate of silver, may be administered four times a day. The bismuth acts as an antacid, while the nitrate of silver and opium relieve the irritability of the gastric nerves. Where vomiting is due to gastric catarrh, nitrate of silver is also of direct service. In this case, however, there is no evidence of inflammation; there is no fever, and the tongue presents a healthy appearance.

Suppose, however, that bismuth and nitrate of silver were not sufficient to check the vomiting. In such a case the oxide of silver might be used in the same doses as the nitrate, and combined with one-tenth to one-eighth of a grain of extract of belladonna. The other remedies often used in vomiting, such as creasote and ipecac, would not be applicable to these cases. These are of special service in nervous vomiting. If these remedies failed, it would be necessary to wash out the stomach, and for this purpose there is nothing better than the tube of the Es-march apparatus, used as a siphon. By washing out the stomach twice a week with warm water, or water containing an alkali, remarkable effects are sometimes obtained. In this case, as I have said, the simple measures adopted have been successful, and the treatment will, therefore, be continued.

The second case presented to-day I believe to be one of fibroid thickening of the œsophagus near the cardiac extremity of the stomach, producing obstruction. This patient's disease dates back about a year. A valuable negative point in the

history is that he is under forty-two years of age. When a man past fifty presents the symptoms which I shall detail, they are more likely to be dependent on malignant disease than if the same symptoms appear earlier in life. A second negative point is that there is a good family history. A third negative point, that he has not been a drinking man. He has been a painter. The influence of occupation on the development of these troubles is, however, not very clear. The patient with cancer of the stomach whom I presented at the last lecture was a shoemaker, and had been in the habit of sitting with a board pressing against the abdomen. Whether this had anything to do with the development of the disease I cannot say.

Another negative point in the present case is that the patient has not lost much flesh, only about twenty-five pounds in eight months, and at one time there was a gain of seventeen pounds in five weeks. Patients with malignant disease do not usually gain, or, if they do, the rate is much less. The appearance of this man is that of a fairly-nourished individual, and there is no cachexia or evidence of tumor. The whole trouble centres around the difficulty of swallowing. Examination with the bougie shows that there is an obstruction near the cardiac end of the stomach.

The patient has told me that about twelve months ago the present symptoms appeared. He refers the difficulty to an attempt to swallow some ham in which was a piece of bone. At this time he felt a sensation of injury to the œsophagus. At all events, the difficulty in swallowing has continued ever since. At times he has been entirely unable to swallow, and at such periods it has been impossible to pass a bougie, but at intervals he can take milk, broths, and soft foods, and the bougie can be introduced through the obstruction. These facts seem to indicate that occasionally there is either an increase in the local process or that the parts become swollen or congested and therefore the lumen of the tube diminished.

The inferential probabilities drawn from the history in this instance are decidedly in favor of non-malignant disease, and it should also be remembered that malignant disease of the œsophagus usually is located near the point of the bifurcation of the bronchia. The prognosis is, of

course, much more favorable than that of malignant disease, but the resources of therapeutics are limited. The treatment will consist in the systematic use of the bougie. It shall not be employed too often, for it might increase the irritation. Once or twice a week will probably be sufficient. This treatment has been followed thus far, and also a course of belladonna and mercurials. If the obstruction were ever to become absolute, the operation of gastrostomy might be considered.

ORIGINAL COMMUNICATIONS.

REMINISCENCES OF THE CHOLERA EPIDEMIC OF 1832.

BY HIRAM CORSON, M.D.,

Conshohocken, Montgomery Co., Pa.

AS we are having reports that the Asiatic cholera now prevails in France, and judging from former experiences that it will probably visit this country before another year shall have passed away, it has occurred to me that some reminiscences of the disease as it prevailed here in 1832 may be interesting to those of our profession who have graduated since that time.

During the years 1830 and 1831 reports reached us that the disease was steadily advancing from Asia to Europe and across that country, and that it would doubtless reach America in its westward progress. We were informed, too, of its great fatality; yet it produced no great anxiety among physicians here, and none at all, apparently, among the people of our cities until it actually appeared in Canada. About the 1st of June, 1832, a Dutch ship arrived at Quebec, and on the 8th the disease appeared among the crew. It spread over the city with great rapidity, proving fatal to about two-thirds of all who were attacked. In two days (the 10th of June) it reached Montreal, distant one hundred and eighty miles. Here, as in Quebec, it spread rapidly, the deaths in three or four days being from 100 to 150 daily, though the population was only 25,000. The excitement in our cities became intense. In Philadelphia a meeting of physicians was called to take the subject under consideration, which resulted in the appointment of a committee of three or more to visit Quebec and Montreal to see the sick and confer with physicians there in relation to

treatment. Professor Samuel Jackson, of the University of Pennsylvania, Dr. D. Francis Condie, and others, whom I have forgotten, composed the commission. While they are away on their mission of mercy, we will follow the disease as it sped from city to city and spread throughout the country. From Montreal it passed rapidly along the river to the towns bordering it,—to Lake Ontario, thence to Lake Erie, on to Detroit, then by Lake Superior to the Mississippi and Missouri Rivers, seeming to prefer this great watercourse, though striking small towns and country places on either side along its borders many miles from its shores. The disease as it reached us, however, does not seem to have come from that direction.

It first showed itself in New York on June 24, and twelve days afterwards, in that city of 200,000 people, the daily mortality had not reached 20. The marked difference between its mortality there and in Montreal was doubtless owing to the thorough cleansing which the former city underwent after the appearance of the disease at Quebec, and to the universal avoidance of all supposed exciting causes.

It did not occur in Albany at that time, the great half-way house between Montreal and New York, until five or six days after its appearance at the latter place.

Of its appearance in Philadelphia and in our county I have in my diary, from which much of the above has been condensed, the following:

"July 20.—The disease appeared in Philadelphia on the 5th of July, in a man named Musgrave, in Filbert Street, near Schuylkill Third Street [now Twentieth Street], and a few days later two men in a house in Coates Street [now Fairmount Avenue] were attacked.

"Now, nearly every case of disease to which I am called is of the stomach and bowels,—gripping, frequent purging of watery stools, and vomiting. Yesterday I was called to a case of cholera morbus of our usual kind, and to-day to two cases in one house; but in Philadelphia there are, it is said, 4 or 5 cases of real Asiatic cholera. In New York from 100 to 150 cases occur daily, with from 50 to 70 deaths.

"In Quebec and Montreal the disease is subsiding rapidly, for the *Montreal Gazette* of July 7 says, 'The disease may now, after being with us thirty-eight days, be said to have left us, the deaths yesterday

from cholera being but seven,—not an unusual number for this season of the year.’”

“July 21.—During last week several cases occurred in New Jersey at great distances from each other. In one family of 5 persons, in a country place, 4 of them died in a few hours. (Newspaper report.)

“There has been no case reported in Philadelphia for three days past, and it is believed by some physicians that the cases previously reported were only cholera morbus.”

“July 22.—Last Friday, 20th, there were 213 cases in New York, and 100 deaths. The disease has increased rapidly there during the past seven days.

“It is supposed that at least one-third of the inhabitants of the city have already left it for the country.

“Three hundred *women of the town* came from there to Philadelphia in the steamboat yesterday, and between two and three hundred a few days ago. (Fortunate Philadelphia!)

“Nearly all the small towns on the main route from New York to Philadelphia have been attacked during the past week.

“I was called, a few hours since, to a case of what I choose to call cholera morbus, in which there were severe cramps of the limbs, a symptom which I have not encountered in the cholera morbus of other years.”

Readers of the *Times* must bear in mind that, at the time of which I speak, the communication between New York and Philadelphia was by one daily stage across New Jersey. It was often several days after events occurred there before we heard of them here: so my account of the progress made by the cholera there could not be recorded day by day, but it is, so far as it goes, mainly correct, and, as it may be interesting to know how rapidly and regularly it reached its height and declined, I give the following tables as they appeared at that time in the Health Reports of the two cities. In New York, up to July 22, 1600 persons had suffered from the cholera, 700 of whom had died.

July	23,	New Cases,	231 ;	Deaths,	73
“	24,	“	“	“	96
“	25,	“	“	“	61
“	26,	“	“	“	55
“	27,	“	“	“	46
“	28,	“	“	“	68
“	29,	“	“	“	38

July	30,	New Cases,	103 ;	Deaths,	38
“	31,	“	“	“	49
August	1,	“	“	“	41
“	2,	“	“	“	34
“	3,	“	“	“	24
“	4,	“	“	“	30
“	5,	“	“	“	29
“	6,	“	“	“	37
“	7,	“	“	“	32
“	8,	“	“	“	22
“	9,	“	“	“	28
“	10,	“	“	“	26
“	11,	“	“	“	33
“	12,	“	“	“	23
“	13,	“	“	“	23

This account, to the 13th of August, gives the number of seizures in New York as 4348, with 2756 deaths. The complete account, made after the disease had passed away, gave the seizures as 5381, with 2117 deaths during its continuance there.

This shows a milder disease or better treatment in New York than in Montreal, for New York was about eight times larger than Montreal, and yet at the latter place as many as 140 died in a single day, that being reached only once in the former city.

Philadelphia fared still better than either of the cities yet named. Although the first case was on July 5, yet until the 15th there were only 5 or 6 cases reported by the Board of Health, and from that time no report of any till the 28th of July, when they occurred as follows:

July	29,	New Cases,	6 ;	Deaths,	1
“	30,	“	“	“	7
“	31,	“	“	“	9
August	1,	“	“	“	9
“	2,	“	“	“	15
“	3,	“	“	“	14
“	4,	“	“	“	13
“	5,	“	“	“	43
“	6,	“	“	“	74
“	7,	“	“	“	73
“	8,	“	“	“	46
“	9,	“	“	“	58
“	10,	“	“	“	39
“	11,	“	“	“	33
“	12,	“	“	“	31
“	13,	“	“	“	49

My record ends with this date, and I give it here merely to show how it increased and diminished. Dr. Jackson, in his paper, made after ample time had elapsed for an accurate account, gives the population as 160,000, the seizures as 2314, deaths, 935. The cases were found in every part of the city. I have already spoken of the first case: the second and third were remote from it, in the Northern

Liberties, on July 9; in a few days, two more, near the last; then one away in Kensington, two miles from the first case; then a few scattered cases, until the 27th and 28th of July, when the epidemic swept on in full force.

In private practice there were 1175 cases, with 270 deaths; in hospitals, 874 cases and 342 deaths; in the old Almshouse, 174 cases and 92 deaths; in Arch Street Prison, 86 cases and 42 deaths.

Southwark and Northern Liberties, the suburbs nearly equidistant from Market Street, suffered nearly the same, while the city proper (not counting the old Almshouse and Arch Street Prison) was not so severely afflicted. In the first few cases which occurred, no communication could be traced to infected persons or districts.

Let us now return to New York, and see how the disease was brought there. On a close examination of this subject may depend our decision in relation to the value of quarantine measures. Sixteen days passed from its appearance in Quebec until it was found in New York, and before a single case occurred in the four hundred and fifty miles of country between the two places. Even Albany, the great resting-place for travellers, both by land and water, from Canada to New York, was still free from it when New York's first case occurred, in one of the old inhabitants, exempt from intercourse with the business people. Then three days more elapsed—nineteen days after its appearance in Montreal—before the second case occurred, in an old woman, an inmate of the Bellevue Almshouse, three miles from the city, who had been confined in the house for three years, and there was no possibility of tracing its immediate origin. From the Canadian cities it seemed to pass up the great lakes, and not down through the land-routes to the New England cities. Nearly all the towns on the seaboard from the St. Lawrence to Cape May were exempt. Except in very few cases, which occurred in Boston, Newport, New Haven, and Providence, all New England seemed to escape. The cases in Bellevue Almshouse were 530, with 298 deaths.

The following table, taken from Dr. Jackson's report (page 292 of the *American Journal of the Medical Sciences*, February, 1833), may be interesting:

	Population.	Cases.	Deaths.
Quebec,	32,000	5783	2118
Montreal,	28,000	4420	1904
New York,	140,000	5814	2935
Philadelphia,	160,000	2314	935

The disease, as already stated, did not occur in Albany for nearly a week after it appeared in New York. In all the places spoken of, the largest number of patients were found among the laboring poor, the intemperate, and those broken with toil, poverty, and distress.

By the time the Philadelphia Board of Health made its second report (July 28), the whole country was excited, and, as the bowel-affections incident to the season were evidently of a more active and severe kind than usual, we of the country were on the lookout for the dreaded visitant. In all the cities named, before the real Asiatic cholera occurred, there was a general prevalence of bowel-affections, from which comparatively few escaped. It was not uncommon to have, in addition to the diarrhoea, cramps and a sense of fatigue and tension in the calves of the legs.

During this time it was evident that we were here, at my home (fourteen miles from the centre of the city), feeling the approaches of the disease. On July 19 I had two severe cases of what I called cholera morbus,—fair specimens of cholera, as given by Prof. Jackson; July 20, one case; July 22, one case; July 24 and 27, each one case. They were violent cases, attended by cramps of the legs in addition to the common symptoms; and, though we knew nothing of germs and germicides, had not heard of Pasteur or Koch, were ignorant of heart-clot, embolism, and septicæmia, they were all speedily cured by the use of calomel, and opium and camphor, aided by external irritants and fomentations, in some cases preceded by venesection. Lest my readers should be disgusted by the mere mention of this last-named means of cure, I will say more about it before I finish.

The situation was becoming serious. Exaggerated reports of its progress and fatality were passed from mouth to mouth, and doctors were appealed to for advice and encouragement. At that time, even here, on the very border of Philadelphia County, physicians were far apart. Each one of us had a large area of country, in which almost every family depended upon

his knowledge, skill, and faithfulness to duty. Much as we had desired and sought information in relation to the disease and its treatment during the two years in which its coming was heralded, we had learned but little concerning it. As the Commission had returned from Canada, and two of the most eminent physicians of Philadelphia—Dr. Joseph Parrish and Prof. Samuel Jackson, of the University of Pennsylvania—had established hospitals for the reception of patients, and as the cases coming to me almost daily gave evidence that we were within the range of the epidemic's influence, it seemed to me to be my duty to go to Philadelphia and see what treatment was in vogue there: so on the 31st of July a visit was made to the hospital of Dr. Parrish. His room was in Church Alley, between Front and Second and Arch and Market Streets. His son, Dr. Isaac Parrish, told me that they had begun a few days before with the cooling treatment,—washing the body with cold spirits, and giving ice or iced water to allay the insufferable demand for cold drink. But, as the patients had been brought in from the streets when far advanced, all their remedies had been in several cases of no avail. The two patients then before us were in a hopeless condition. They had been in there only since the night before. I had seen men exceedingly ill with cholera morbus, but had no conception before of the appearance of one in the deep collapse of Asiatic cholera. There they lay, cold and clammy all over the body, eyes sunken, pulseless, voice sunk to a whisper, body wasted and shrunk to a frightful degree, and, like the lips, of a blue tinge.

Dr. Jackson had pursued an opposite course,—had stimulated his patients and externally had used hot vapor steam-baths. He had been as unsuccessful as Dr. Parrish. Both of these eminent men soon fell back on their previous knowledge of the action of medicines and their experience in the treatment of affections of the bowels, especially cholera morbus, which has so close kinship with Asiatic cholera, and were afterwards very successful.

Having thus traced it from city to city, or rather its appearance at various places, for thus far it does not appear to have been introduced by any means which a strict quarantine could have prevented, let us see in what way it spread to country places.

No words of mine can give an adequate idea of the panic which prevailed at that time in city and country. People fled from the city as best they could,—by the few stages which then passed to and fro from country towns, by boats which did the carrying-trade on the Schuylkill and Delaware Rivers, and by wagons of farmers returning from market. When in Philadelphia, no one had spoken to me with confidence in any plan of treatment, and I returned to my home with a feeling of great responsibility and a deep conviction that I was poorly qualified for the earnest duties likely to come before me. On the 4th of August a severe cholera morbus occurred in a woman 60 years of age; and on the 5th, one of Asiatic cholera. I called it *that*, because of the profuse discharges of rice-water, the vomiting and cramps of body and limbs, corrugated skin, and cold, clammy surface. The same day I had another case, one mile from the former, in a woman who had not been from her home for a long time, but they were all within a mile of the river. August 7, was called to see a group of Irishmen engaged in digging a canal at Conshohocken, at a place where there were then only a few houses for laboring men, besides the farm-house and barn of Mr. Harry. In this barn I found several men in a sad condition. One was dying, some were drunk, and some evidently quite sick, as well as under the influence of whiskey. I attended pretty faithfully to them for a few days, but, as there was no nurse, and as the thirst of the sick was so great as to cause them to take water every few minutes, to be vomited as soon as taken, my ministrations did no good. One day when I arrived, a dying man told me that when he would ask for water one drunken fellow would dash it on him from a bucket. Three of them died in a few days, and I prevailed on the others to go away. They seemed to be well, but were drinking very much of whiskey. The next day they were all away. Whether I did right in advising them to separate has been to me, ever since, an unsolved problem. The next day, or the day after they left the barn, Dr. Roger Davis, who lived in a very out-of-the-way place, five miles from Norristown, found a sick man on his piazza early in the morning. He wanted medicine, but had waited several hours for the doctor to get up, and by that time was so ill that he could not

travel farther. Dr. Davis made him as comfortable as he could in the barn, but he died in less than twenty-four hours. Dr. Davis had not the least suspicion of anything but cholera morbus. Next day he, Dr. Davis, was sick, and the day after, very sick. A physician saw him, but he was then in a profound collapse, and died a few hours afterwards. The man who had died there reported that he had come from Conshohocken, was one of the group spoken of, and that he had been taken sick a few hours after leaving there, while walking up the river. If it came to Dr. Davis from that man, it would favor the belief in a peculiar poison—germ, shall I say?—which acts very quickly. From this time, August 12, until September 22, it spread over the region in which I practised, giving me twenty-eight more cases, all of whom recovered but two, of whom I will give brief accounts.

N. Leonard, between 40 and 50 years of age, a vigorous man, in good health, living opposite Conshohocken, close to the side of the river, was troubled with diarrhoea and occasional vomiting from the early morning of August 11 (only four days from my first visit to the sick men in the barn, a quarter of a mile away, on the opposite side of the river) until 4 P.M., but he had not kept in the house, nor had he felt that it was a serious illness until at the hour named, when the cramps appeared. At seven o'clock, when I saw him, he was still sitting up, though having cramps, and very often vomiting and purging of that peculiar fluid since known everywhere as "rice-water discharges;" pulse was small, frequent, his voice becoming husky, and his skin perspiring profusely. I attempted to give him my cholera morbus treatment,—salt-water emetic, camphor and opium, calomel, and, externally, frictions and warmth; cold drinks, and ice in small lumps. Here I ought to say that after Dr. Jackson's failure with the hot vapor, and which failed with others also in their small hospitals, he had hollow tin vessels made to fit the thighs, legs, arms, and body, which being filled with hot water were applied. I used these on my poor patient, to check, if possible, his profuse cold perspiration. My efforts for hours were of no avail. I sent miles away for an old physician, who, on being told of the ailment, would not come; then for my brother, Dr. William Corson, of Norristown, with only a year's practice. He came at midnight. All my efforts had been of no avail. Medicine taken by the mouth was quickly rejected, the watery discharges so copious that the bed was thoroughly soaked and they ran through it to the floor. To those who have never seen such a case, a

truthful statement of the amount would be deemed incredible. I speak of it as gallons. Dr. Jackson said he had seen bucketfuls discharged in a few hours from the bowels alone. It was then midnight; the pulse was barely perceptible, the voice had sunk to a whisper, the skin was wet, and cold as the body of the dead, but the mind clear. In this case, as in others in collapse which I saw later, there seemed to be no anxiety about the result, no fear or care about it, save to have relief from cramps. The suffering was fearful: though all we could do we did. Frictions, and the tourniquet to the limbs, were somewhat relieving to the cramps there; but for those in the muscles of the chest and belly—great hard balls, which caused faint cries of agony—we could do nothing. We stood by him hour after hour, and when the morning dawned the night and the patient passed away together. How helpless we had been to relieve! how confused and uncertain as to the proper course to pursue!—the patient in fearful agony from cramps of the muscles of the legs, the belly, and the chest, his skin cold as the dead, even his tongue cold, and yet oppressed with a sense of heat all over his body, and crying for water! water! water! With the clinical thermometer to determine the temperature, and the hypodermic syringe to put anodynes where they would certainly exert their power, we could now have no excuse for allowing a patient's last hours to be so agonizing.

From that time cases followed each other rapidly until the 6th of September, when one, also speedily fatal, occurred, which was so like the one already given that I would not refer to it, save to show the exciting cause.

Samuel Summers, a strong young man, accustomed to work for the farmers, after working all day September 5, went to a "watermelon party," and stayed till midnight, dancing occasionally; next morning was at work at sunrise, as was then the custom. When called to breakfast at seven o'clock, he felt sick, and did not go. In a short time—even before his fellow-workman finished eating—he went home, a distance of only one-eighth of a mile, vomited, had much pain, and copious thin discharges from the bowels. He was several miles from me, so that I did not see him till 10 A.M. Found him then, only two hours after his first feeling pain and nausea, having copious rice-water discharges, much sickness of stomach, vomiting, and strong cramps of the limbs, pulse small, perspiring greatly. He was already passing into collapse. Although I called two other physicians to aid me, one of whom was a man of long practice, it was all to no purpose. I did not leave him till he died, at 10 P.M.

It was just such imprudence as this—

indulgence in watermelons, and loss of a night's sleep—that brought on many cases. There had been no case in that region before his, and the people there had not been greatly alarmed. All my cases, except those above named, thirty in number, got well, but they had not passed beyond the second stage; many of them had severe vomiting, profuse purging, and cramps of the legs, but they were vigorous, fearful of death,—a most encouraging sign to me,—and could bear venesection if deemed necessary. If the pulse was yet unaffected and cramps present, I resorted to it, then gave “Dr. Parrish’s Camphor Mixture,” or camphor and laudanum, with ice or iced water to allay the fearful thirst; also used mustard externally, or, where the surface was cold, with clammy and shrivelled skin, hot water was used in the tin vessels as recommended by Dr. Jackson. Calomel was given in many cases, for no other reason, I suppose, than that it was believed to be efficient in causing a flow of bile, and that the presence of bile in the stools was regarded as a favorable indication.

Though all whom I attended got well, save those named, I feel that one more experienced in the treatment of disease than I then was might possibly have saved both Leonard and Summers, for Dr. Jackson reports cases which were in a seemingly worse condition when he was called, some of whom recovered, though his means of cure were the same as mine.

Let us hope that the lapse of fifty-two years has given us better means of relief if we should be again called on to confront the disease. Though Drs. Parrish, Jackson, and their followers differed greatly from Dr. Hodge and some others about the pathology of the affection, their treatment was nearly the same. Listening to the crude theories which were sent forth by persons who had never seen a case, but who fancied that it was something pathologically different from any disease they had ever seen before, and acting on these theories, the first few cases were fatal in almost every hospital; but when, more familiar with it, they attended to the symptoms and applied their successful experience for their relief, all of them proved to be fairly fortunate in saving lives. The fatality in Philadelphia was one death to two and a half persons attacked, while in New York it was one to two.

In a subsequent communication I pro-

pose to refer particularly to the various methods of treatment then employed,—the use of calomel, venesection, leeches, emetics,—at first so popular,—cathartics, hot vapor-baths, dry heat, ice externally and internally, which were approved by the experience of leading physicians who were engaged in active practice at the time this epidemic under consideration prevailed in Philadelphia.

REPORT ON THE PROGRESS OF OTOLOGY.

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DISEASES OF THE ORGAN OF HEARING OCCURRING IN TYPHOID FEVER.

DR. FRIEDRICH BEZOLD, of Munich, has written a very interesting and valuable paper on this subject in the *Archiv für Ohrenheilkunde*, vol. xxi. part 1.

Between 1876 and 1880, Dr. Bezold observed fifty cases of aural disease occurring in twelve hundred and forty-three cases of typhoid fever. In this list of ear diseases, those of purely nervous origin are not considered, for reasons yet to be given.

The fifty cases of ear disease observed and recorded were all due to inflammatory changes in the middle ear. In some of these the internal or the external ear was implicated secondarily. Otorrhœa due to primary disease in the auditory canal was not found; it was always due to previous inflammation in the middle ear.

There are three forms of disease of the ear which occur in the course of typhoid fever:

1. Hardness of hearing without inflammatory manifestations, and without any objective alteration in the membrana tympani and in the middle ear: this alteration in function may be due to central changes.

2. Closure of the Eustachian tube, with consequent retraction of the membrana tympani.

3. Purulent inflammation of the middle ear cavities: (a) without perforation of the membrana; (b) with perforation of the membrana, and otorrhœa,—i.e., otitis media purulenta acuta.

I. In the first class the cause of the hardness of hearing is not clearly demonstrable. It is doubtful whether these forms are to be regarded as the result of a typhoid suppurative destruction of the

fenestra, with a consecutive suppuration in the labyrinth, or whether it is to be supposed that they are due to an independent purulent process in the labyrinth analogous to that which seems to occur in cerebro-spinal meningitis.

The ear may be secondarily affected in typhoid fever by purulent parotitis which discharges through the auditory canal. This rupture into the canal is said to occur usually at the junction of the cartilaginous with the osseous canal.

The first class named above, the so-called nervous form of deafness, is characterized entirely by subjective symptoms, variable deafness of a moderate degree, and tinnitus aurium. But the nervous forms of ear disease in typhoid fever are not counted in the fifty cases of ear disease observed by Dr. Bezold, because the slight deafness could not be properly measured in the wards of a hospital, and also because this form of deafness occurs in those cases in which the nervous phenomena generally are very prominent, and uncertainty would attend all examinations of the ear. Furthermore, it is desirable to let such cases alone. This form of disease of the ear in typhoid fever has been observed by Dr. Bezold in private practice, and it is seen that in some instances there is a restitution of the hearing with the disappearance of the fever.

It is not, however, the province of the aurist to collect the large number of observations of the onset, the grade, and the frequency of these purely nervous disturbances of the organ of hearing in typhoid fever, which are demanded for the proper prosecution of the study of the course of the affection from the beginning. This falls to the duty of the clinician.

II. The second form of aural disease which may occur in typhoid fever—viz., closure of the Eustachian tube, with consecutive manifestations in the membrana tympani—occurred only in two instances in the fifty cases of ear disease observed by Bezold, and then once it occurred during convalescence. This is contrary to the general supposition that closure of the tube often occurs in typhoid fever.

III. By far the most frequent and most important complication which befalls the ear in typhoid fever is the third form named in the table already given,—viz., acute inflammation of the middle ear, —which, in the majority of the cases,

leads to perforation of the membrana tympani and chronic otorrhœa. In twelve hundred and forty-three cases of typhoid fever, acute otitis media was observed forty-eight times,—i.e., in nearly four per cent. of the cases. Forty-one of these cases terminated in perforation of the drum-membrane,—i.e., 3.3 per cent. of all cases of typhoid fever.

In contradistinction from the nervous affections of the ear, which appear early in the disease, even as prodromes, the inflammatory processes in the middle ear do not appear until near the end of the general malady. They occurred, on the average, between the twenty-fifth and the thirty-fifth day of the disease. Only in three cases did they occur before the twentieth day,—viz., on the ninth, the thirteenth, and the seventeenth day.

The course of the otitis media acuta, according to the observation of the forty-eight cases alluded to, is as follows: (a) The lighter forms, which run their course without perforation of the membrana tympani. Generally nearer the end than the beginning of the disease, moderate and intermittent pain is felt in the ear, with slight hardness of hearing; the latter may increase considerably during the further course of the disease. The membrana tympani is at first slightly, later on considerably, injected, chiefly in its upper and posterior quadrants. The injection, following the vessels of the manubrium mallei, reaches finally to the umbo and the hinder periphery of the membrana, so that its boundaries with the auditory canal above and behind become very indistinct, especially since an inflammatory infiltration of the cutis of the latter is generally present. The remaining uninjected parts of the membrana have a dull, grayish-white appearance. This condition may persist for several weeks, inflation having no effect in bettering the hearing, as it has in ordinary cases of tubal affections. Spontaneously, at last, the ear seems to resume its functions. This form, then, manifests in general the clinical character of acute catarrh of the middle ear. A post-mortem examination of such a case reveals that the secretion in the middle ear, even in these lighter cases of inflammation in the course of typhoid fever, is, from the outset, purulent.

(b) Otitis media purulenta acuta, with perforation of the membrana tympani.

This form of aural disease was observed thirty-six times on one side and five times on both sides. Its onset, which usually occurred in the fourth or fifth week of the general disease, resembles in character the previously described form. All the inflammatory symptoms are, however, more pronounced. The congestion of the membrana tympani extends to the osseous wall of the auditory canal, is intense, and produces with the coexistent swelling of both parts a complete disappearance of the upper and posterior boundaries of the membrana tympani. From the beginning there is usually felt a pulsating tinnitus; the pain in the ear is great, and throbbing in character: comparatively frequently, even in the beginning of the disease, there is found a marked sensitiveness to pressure in the mastoid region, directly behind the auricle. As a rule, there is, at the outset, fever with a temperature varying from 37.8° to 40.5° C. If paracentesis is not performed, in a day or two a spontaneous rupture of the drum-membrane ensues. The discharge is usually copious, and is either serous or sero-sanguinolent, with an admixture of flocculent pus, from the beginning. The general inflammatory symptoms grow milder after the opening of the drum-membrane, but do not entirely cease. After the discharge is fully established, the maceration of the membrana and adjacent parts in the auditory canal becomes so intense as to hide the seat of disease from view. It is worthy of note that in these cases of aural disease in typhoid fever the perforation, instead of being in the anterior inferior quadrant, is found in the posterior half of the membrane, and rarely under the umbo. Its form is round, and its size is about that of a lentil. This may be due to the recumbent posture of the typhoid patient, and the gravitation of the purulent contents of the tympanic cavity to the posterior parts of the ear. Dr. Bezold also suggests, besides this explanation, that the position of the perforation may depend directly upon the locality of the inflammatory process in the drum-cavity. Since the chief seat of the inflammation in these cases is in the posterior parts of the drum-cavity and in the mastoid cells, the perforation in the membrana probably ensues in that portion most contiguous to the seat of the inflammatory process.

The discharge gradually loses its sero-sanguinolent character and becomes in a

few days muco-purulent, without increasing in quantity. It may continue in this form with varying quantities for several weeks or even months, without being affected by the most careful antiseptic treatment by means of boracic acid. The intensity of the inflammation may be so great as to lead to the formation of a red and exuberant polypus occupying one-half of the entire auditory canal, and which will require evulsion by means of the wire snare.

In some instances, during the suppurative process in the ear, instead of the usually intensely reddened mucous membrane in the drum-cavity, there may be seen through the perforation a whitened membrane which is strongly suggestive of a diphtheritic affection.

Typhoid otorrhœa is characterized by the frequent and intense participation of the mastoid in the inflammatory process. In forty-one cases it was noted by Bezold nineteen times, in eleven of which it manifested itself at the beginning of the aural disease, and in the other eight cases the time of its onset varied between the second and twelfth day. The pathological investigations in cases of this character enable the writer to say that, besides the drum-cavity, the mastoid antrum and the neighboring mastoid cells participate largely in the purulent inflammation arising in typhoid fever. Very often tenderness in the mastoid is one of the earliest symptoms and precedes the perforation of the membrana tympani. The presence and degree of tenderness to pressure in the region of the mastoid antrum forms, according to our author, the surest measure of the intensity, and hence of the duration, of the inflammation in the middle ear. This tenderness may continue with variations for several weeks, and then suddenly increase and lead to suppuration in the external periosteum of the mastoid, finally necessitating an incision. In five instances of the nineteen above named, suppuration thus occurred between the bone and the periosteum, and Wilde's incision was performed.

The variability of the temperature in these cases resembles that in pyæmia. The deafness also shows peculiarities in the purulent otitis media of typhoid fever. Thus, after eleven days of suppuration on one side and violent symptoms of inflammation on the other for two days, with

involvement of the mastoid cells, the deafness may become so intense that loud speech cannot be heard at all, and the tuning-fork is perceived only immediately in front of the auricle. This absolute deafness for speech continued in one case for nineteen days. Subsequently the right ear became normal after the subsidence of the inflammatory process. The condition of the left ear could not be watched until recovery had been complete, as the patient left the hospital. Such marked impairment of hearing is never observed in ordinary acute purulent inflammation of the middle ear. It is supposed that the labyrinth is involved in these instances of profound deafness in typhoid otitis purulenta.

The duration of typhoid otitis media purulenta is usually longer than that of spontaneous or sthenic otitis media, but, notwithstanding the accompanying inflammation of the mastoid cells, it does not manifest the destructive character of purulent otitis of scarlet fever or of phthisis. In those cases which can be observed until entire recovery takes place, it is found that the perforation in the membrana closes and the hearing becomes nearly normal.

Treatment.—Since 1878, Dr. Bezold has pursued the antiseptic treatment by means of boric acid, and, although he does not observe the great controlling influence over the amount of muco-purulent secretion in the middle ear he once was inclined to claim for it from the favorable course of the first cases thus treated, the antiseptic treatment by means of boric acid is considered by him indispensable in the treatment not only of chronic but also of acute suppurative otitides. This form of antiseptic treatment prevents decomposition and secondary inflammation of the canal.

The ear also shows no tendency to inflammatory reaction from the treatment by this means, whereas, before the days of antiseptic treatment, simple warm-water injection into the ear in ordinary cases of acute inflammation of the drum-cavity would be followed by inflammatory narrowing of the canal, lymphangitis in the retro-maxillary fossa, and erysipelatous tumefaction of all the parts surrounding the ear. Granulations, should they not yield to the treatment by boric acid, which they usually do, are to be combated by touching with nitrate of silver. Should polypi

be developed, they must be extracted by means of the wire snare.

The great tenderness in the mastoid, usually manifested from the outset of the aural complication, was treated by local blood-letting and partly by continuous cold applications and iodine. The most positive, if not the most enduring, relief was afforded by the local depletion. In five instances paracentesis membranæ tympani was performed before the spontaneous rupture of the membrane occurred. Wilde's incision, which was required five times on account of swelling of the mastoid with suppuration beneath the periosteum, was performed, with one exception, at the posterior line of attachment of the auricle. Three times the bone was found denuded to a small extent, and a communication existed between the outer table and the mastoid cells, so that a probe could be inserted from one to four centimetres into the mastoid cavity. After the opening was thus made behind the ear, the suppuration from the canal quickly ceased, and the perforation thus made usually closed in from a few days to a few weeks, so that an operative extension of the opening in the bone was not rendered necessary. In one case a sequester was thrown off. In another instance, Dr. Bezold believes that the suppuration in the middle ear extended to the mastoid cavity by the way of the incisura mastoidea. The pus was retained beneath the cellular tissue of the outer mastoid surface, where it was finally absorbed.

Pathology.—Dr. Bezold then gives a detailed account of six post-mortem examinations of the temporal bones of those typhoid cases affected with profound aural inflammation. He also made sixteen post-mortem examinations of the ear in those who had died of typhoid fever, but in whom there had been no aural symptoms. He found in the latter class, six times glairy mucus in the Eustachian tube, and four times secretion in the drum-cavity,—viz., once of a glairy nature, once serous, once muco-purulent, and once purulent. In a third series, a slight hyperæmia of the mucous membrane of the tympanic cavity was observed in two instances; in a fourth, there were found three cases of infiltration of the mucous membrane of the drum-cavity; and in a fifth class there was found infiltration and extravasation of blood at a circumscribed area in the mas-

toid cells, in one case. In a sixth set, extravasation of blood was found in the membrana tympani in two cases, while in a seventh series, perforation of the membrana tympani was found twice, probably the result of an inflammatory process previous to the typhoid fever. In an eighth class are placed the only two cases in which nothing abnormal was observed in the ear.

Etiology.—The reason given for the occurrence of acute purulent inflammation in typhoid fever is the diminished power of resistance of an organism under the influence of typhoid disease or of any acute infectious disease. This sensitiveness of the typhoid subject is shown in the ready occurrence of malignant œdema from a subcutaneous injection of musk, which is borne very well in other diseases.

Dr. Bezold finally presents the possible explanations for the occurrence of the purulent form of otitis media in typhoid fever:

1. Direct propagation of the inflammation through the Eustachian tube, although simple closure of the tube can, in all probability, be excluded as a causation of the purulent process in the ear.

2. The accidental introduction of septic material into the drum-cavity,—viz., decomposed secretions in the nasal cavities by the act of nose-blowing on the part of the patient.

3. Emboli in the mucous membrane of the middle ear, originating in either an endocarditis and thrombi of the left side of the heart, or from purulent foci in the periphery of the system.

It is supposable that during the height of the typhoid disease some of the secretions remain in the naso-pharynx, which part, as a rule, is affected in typhoid fever by swelling and infiltration, and, according to Hoffmann, sometimes by diphtheritic processes. These secretions undergo decomposition, and, in the endeavors at removal, a blowing of the nose may force some particles of this matter into the middle ear, and even into the mastoid cavity.

The presence of such irritants in the cavity of the drum is resented by it very much as the peritoneum would react against such intrusions.

A second explanation of the occurrence of inflammatory reaction in the middle ear in typhoid fever is that it is due to embolism. Small emboli in the mucous

membrane of the middle ear have been demonstrated by Trautmann, and such agents may cause purulent processes in the ear during typhoid fever.

REMARKS UPON A CERTAIN CLASS OF THE INSANE.

BY HENRY M. WETHERILL, M.D.,

Pennsylvania Hospital for the Insane.

A GENTLEMAN prominent in the management of some of our most worthy charitable institutions directed my attention to the fact that, while those of the insane who are confined in hospitals and asylums are protected by stringent laws and are subject to periodical visitation and inspection by officers of the commonwealth, there is yet another class who are left often without any protection against ignorance, prejudice, neglect, and cruelty. These are the insane who are detained and treated in their homes, and it is of them and of their rights that I wish to say a few words.

This lunacy law of 1883 demands the registration, the licensing, and the official visiting of all houses where more than one insane person is detained, provided that compensation is received for the detention and care of such person, and further enacts that the same benefits be extended to the insane inmates of houses where more than one of such is detained, whether compensation is received or not. The first clause protects the insane in asylums, or those who have recovered from attacks of mental disease, from becoming the victims of a money-getting rapacity; the second clause covers the indigent insane of our almshouses and State asylums.

This new law contemplates the protection merely of collections or congregations of these unhappy members of society, without taking cognizance of a vast number of individual cases left to the mercy of a variety of circumstances and contingencies. These need the benefits of wise and humane legislation to, at least, an equal extent with the others. The individual unfortunate detained at home is subject to sources of wrong and to elements of danger to himself and others to which the inmate of a respectable asylum is almost a stranger.

The new law, in order to do the most possible good, should have covered the

entire ground, and demanded, in addition, the registration and visitation, but not the licensing, of all houses where one insane person is detained, thus bringing under its influence a class of insane who require supervision.

The respectable charities of the State have cheerfully shouldered the burden of additional expense and trouble incurred in obedience to the requirements of the law, not because their patients needed its protection, nor because they had anything to learn at the hands of these law-makers, but because there were those among them who were not single-hearted or clean-handed in the care of this most helpless portion of our community, and all had to be brought to one common level of subordination, so that the evil might be stamped down. Now, if boards of control, managers of charities, bodies of respectable members of society, do not refuse to be at expense and inconvenience for the public good, why should families or individuals consider the registration and visitation of their insane by competent legal officers an infringement of their liberties? There is a certain small proportion of the insane now detained in some asylums who would be quite as safe and more comfortable were they cared for at home; but, on the other hand, the great majority of those detained at home would be happier and safer as inmates of well-regulated asylums. The insane person detained at his home is more often the victim of ignorance than of wilful neglect or cruelty: a bare, uninteresting apartment is allotted to his use, in which most of his time is passed, in the company of an attendant who is very unfit to be his sole companion, even though he may be physically competent. The patient suffers from lack of fresh air and exercise, and keenly feels the need of social intercourse, amusement, and recreation. He is deprived of much that he might otherwise enjoy, in order that it shall not be known that there is "insanity in the family." Could anything better prove that it is there? When was this secret ever kept? If he happens to be suicidal, homicidal, or a pyromaniac, he is a constant source of danger to himself and others.

Such lunatics, goaded to rage or rendered melancholy by their cramped, unnatural lives, frequently escape and commit suicidal or other acts of violence. One has only to read the papers to have

the truth of this statement illustrated. Should such a one happen to have a brutal attendant, they continue to mutually brutalize each other in secret until a domestic tragedy reveals, sooner or later, a course of wrong-doing and wrong-enduring.

There are those, again, who are cared for at their homes and treated as members of the family, who are allowed to wander about unattended, daily exposing themselves to danger, insult, and injury, and their friends to the reproach of negligence. This is the other extreme, and involves the patient in almost as great risk as his close incarceration.

If a portion of our insane are to be inmates of their homes, then we must be prepared not to be ashamed of them, not to thrust them into garrets, but to treat them as much like rational beings as their cases admit. Patients who at home cannot be amused, who cannot, properly attended, walk abroad, or ride, or attend certain places of amusement, or enjoy some social intercourse, should be in an asylum, where these very necessities of life are daily furnished.

The regular registration and visitation of all insane living in their homes would prove very advantageous not only to the patients themselves, but to their natural guardians, to the public, and to science: to the patients, as thereby their rights and privileges would be defined, their proper degree of freedom, enjoyment, comfort, and safety assured; to their friends and guardians, as thereby their great responsibility would be shared by an official competent to advise upon such points as the selection of attendance and nurses, the regulation of their duties, general hygienic management, and the capture and return of the escaped; to the public, as thereby it would be better protected against some dangerous members of the community; and to science, as then the statistician would at last be enabled to grasp beyond mere estimate and conjecture the actual number of insane in the State, whereas now, as heretofore, all his conclusions are confounded by this "unknown quantity."

It may be that society of the present day is not prepared for such an advanced stride; but, as the next revision of the lunacy law may include this class of the insane, it is time to make it the subject of thought and discussion. In the absence

of any legislation upon this special class, very much may be done to render tolerable the lives of many insane individuals who may be said at this time simply to exist; but why not utilize even an imperfect mind so far as its power for enjoyment and comfort extends?

TRANSLATIONS.

KIDNEY - COMPLICATIONS IN DIPHTHERIA.—Dr. J. Fischl is of the opinion that, even in very well marked cases of diphtheria, simple albuminuria is not so frequent an appearance as is usually taught, while actual acute nephritis, as is well known, occurs very rarely in the course of that disease. He publishes (*Zeitschrift für Klin. Med.*, No. 7) two cases of acute inflammation of the kidneys which made a good recovery after the appearance of dropsy. After making post-mortem examinations of ten cases of diphtheria which had shown albuminuria during life, with occasional tube-casts, he found the following condition in the kidneys upon microscopical investigation: in the arteries there was alteration of the *adventitia* (partly accumulation of cells, partly a massing of thready material); also, in a few cases, a change in the *intima* (swelling and desquamation of the endothelium). In the Malpighian corpuscles the characteristic alterations of glomerulo-nephritis were found; not seldom contraction also was observed in these bodies. In regard to the interstitial changes, the results of Dr. Fischl's examination agreed with those of most observers. In the parenchyma he detected swelling and fatty degeneration of the epithelium of the contorted tubules, and red blood-cells and round cells with variable frequency were seen in the lumen of these canals, and also in the loops and collecting tubes; but he was unable to find in them any micro-organisms.—*Centralblatt für Med. Wissenschaften*, No. 26.

THE EFFECTS OF THE INJECTION OF PER-OSMIC ACID INTO THE LIVING TISSUES.—The parenchymatous injection of per-osmic acid having been recommended in the treatment of neuralgia, Fränkel, of Hamburg, has made some experiments upon animals in order to ascertain the local effects of the remedy upon the tissues

exposed to its direct action (*Berliner Klinische Wochenschrift*, 1884, No. 15). He found, upon microscopical examination, sixteen days after the first injection, marked changes both in nerve and muscle. In the former, many of the nerve-fibres were broken down, showing total loss of the axis-cylinder and complete degeneration of the white substance. He also recognized the presence of an epineuritis leading to formation of nodes and compression of the nerve-trunk. The muscular tissue in its parenchyma, as well as its interstitial connective tissue, was badly injured; the muscle-bundles were often of a waxy appearance, and were not clear in their striations; but even in others where the striated appearance was well preserved the contractile substance was colored of a dirty-brown tint, and was reduced in diameter. With staining preparations (eosin and hæmatoxylin or methyl-blue) it was demonstrated that there was a high grade of interstitial myositis present, with diminution of the muscular parenchyma. It was noticed that the affected muscles refused to take up the eosin which stained the normal muscle a beautiful red. It was also observed, as an interesting fact, that the axis-cylinder of the nerve-fibres is stained during life by the osmic acid just as it is after death. Perhaps this may, in part, explain its use in neuralgia. Although the effects of the remedy are local, they are likely to be durable; caution should therefore be exercised in using osmic acid injections for the relief of neuralgia or in the treatment of tumors. In a case of goitre, in a young man 19 years of age, L. Szuman injected the one-per-cent. solution into the enlarged gland about twice weekly for a period of three months, with most decided results in reducing the size of the tumor and permanently relieving the patient of his dyspnoea.—*Centralblatt für Chirurgie*, No. 28.

A CASE OF APHASIA WITH LEFT HEMIPLEGIA.—Prof. Catsaras, of Athens, reports in *La France Médicale* (No. 33) an interesting case of left hemiplegia with aphasia in a man who was not "left-handed." The patient was a lawyer, 35 years of age, who first experienced a transitory left facial paralysis in August, 1883. In September he had an apoplectic attack, followed by left hemiplegia and a purely motor aphasia, without any other

trouble connected with language; of this he was completely cured in a fortnight. Towards the middle of November there was a simple loss of consciousness for a few minutes, followed by another period of apparently perfect health; and, finally, on the 20th of January, 1884, he had another apoplectic seizure, with spasmodic left hemiplegia and a complex aphasia, which persisted up to the time of reporting the case. Following Charcot and Küssmaul, it was observed that this patient lost first the memory of the co-ordinated movements necessary to speech (motor aphasia, type Bouillaud, Broca); secondly, the visual memory of words (word-blindness); thirdly, the memory of the movements required in writing (agraphia); and, finally, though incompletely, the memory of the sounds of words (word-deafness).

As to the lesion, the author regards it as embolism of the right middle cerebral artery (*artère sylvienne*), with subsequent softening involving parts of Broca's convolution, the angular gyrus, the first temporal, and, finally, part of the second frontal convolution of the right hemisphere.

In preference to adopting the hypothesis of a double lesion in this case, the reporter suggests that it may be that in this subject there is no crossing of the pyramidal fasciculi.

OPERATIVE TREATMENT OF TUBERCULOUS BONES AND JOINTS.—Selenkow, in a communication to *Wratch* (1884, Nos. 16 and 17) reports good results from careful removal of the affected parts, the diseased bone being resected, and the wound treated antiseptically. In order, however, to prevent any remaining bacteria from developing, he adopted the plan of removing the dressing and drainage-tubes upon the third or fourth day, pressing out the secretions, and, by means of a soft catheter inserted into one of the drainage-openings, injecting with some pressure into the cavity of the wound a ten-per-cent. alcoholic solution of iodine. In this way, adhesions in the wound are torn apart, and only strong, healthy attachments resist the solution. After the tincture has escaped, he occasionally introduces some iodoform into the wound before re-applying the drainage-tubes and bandage. This procedure was repeated every four days. The re-

porter mentions six such cases, of which two required extensive resection, but which were all healed without any fistula. He also has found the same treatment useful after evacuation of scrofulous and other abscesses.—*Centralblatt für Chirurgie*, No. 28.

AN ELECTRICAL NEUROSIS.—In the *Progrès Médical* (No. 27) is a brief but interesting report of a young woman, 29 years of age, who, with ovarian hyperæsthesia, nervous anorexia, and other hysterical troubles of several years' standing, presents evidences of increased bodily electricity. Brushing her hair causes crepitating sounds, and sparks are visible in the dark. Light substances, such as pieces of paper, ribbons, etc., adhere to her fingers, and her linen clings so closely to her body as to interfere with her movements. These electrical phenomena are exhibited in various ways: they are more decided in dry and cold weather, and when her mind is excited. Her bodily feelings coincide with the electrical condition: when the tension is high, she feels well and is intelligent and lively; when the atmosphere is damp, she is, on the contrary, in a condition of lassitude. After electrical discharges from any part of the body she also feels painful fatigue. The patient eats poorly, is anæmic, and is subject to œdema of the ankles, most marked in damp weather. Her skin is unusually dry and harsh, and it is believed that it is to this fact that the phenomena are to be attributed, the dry skin interfering with the normal loss of electricity from the body: they are not attributable to increased production, but to decreased discharge, of electricity. Among the lower animals the cat, having a dry skin, presents somewhat similar phenomena.

TREATMENT OF HEMORRHOIDS.—In the minor cases, Verneuil recommends (*Gazette des Hôpitaux*) cold douches and laxatives; in the severer form, he prefers forced dilatation to all other means. He regards the usual method of stretching with the fingers as insufficient, and recommends instead Ricord's or Lisfranc's speculum for the purpose of dilating the sphincter to its maximum, the patient being at the time under the influence of an anæsthetic. Eight days is usually sufficient for the cure. The author has never experienced any ill results from the operation.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 9, 1884.

EDITORIAL.

IPECACUANHA IN LARGE NON-EMETIC DOSE IN THE TREATMENT OF CHOLERA.

AMONG the numerous plans of treatment that have been recommended or actually adopted in the treatment of true or Asiatic cholera, there is none that, from past experience, seems more deserving of a faithful extended trial than that by ipecacuanha, as presented to the profession with such force and ability by Surgeon A. A. Woodhull, U.S.A.* The method of treatment of dysentery which was advocated by the author, by "large non-emetic doses," has become widely known and is generally practised, but the fact seems not to have been properly appreciated that he also insisted upon the possible value of this method of treatment in Asiatic cholera, the full title of his essay being "Clinical Studies with Large Non-Emetic Doses of Ipecacuanha, with a Contribution to the Therapeusis of Cholera." Without attempting an analysis of this valuable paper, we merely repeat the caution of the author, who especially enjoins upon those who adopt the treatment in their practice to adhere to the non-emetic method. Large doses, from a scruple to a drachm of the powdered root, may be given without disturbing the stomach, if the patient remain quietly in the recumbent posture after its administration and abstain for a time from drinking fluids. Very often, however, it is necessary to insure the desired result by the preliminary administration of a full dose of laudanum. The strikingly favorable results thus ob-

tained by the administration of ipecacuanha in dysentery, in hemorrhage, and in collapse would certainly warrant the further extension of this treatment to analogous conditions occurring in the course of cholera. Nor is the recommendation for its employment in cholera without support from clinical experience. M. Bourdon, in the wards of La Charité, has used it with decided success in the treatment of cholera infantum, which so closely resembles the true cholera.† In fact, it was reported by M. Decugis (mentioned by Woodhull) that at the first appearance of the cholera in 1832, the physicians, struck by its resemblance to dysentery, proposed ipecac, and it was even considered a specific for cholera by Grisolle; but further experience taught that, when used in the ordinary way, it was of slight utility, and this opinion is generally echoed by our text-books.

The treatment of Dr. Woodhull is, on the contrary, based upon the effects of ipecacuanha when administered in a very different manner, in large non-emetic dose, in which it acts as a sedative, as pointed out by Waring, who also recommended its use in cholera.

THE PUBLIC EXHIBITION OF
LEPERS CONDEMNED.

THE attention of the city authorities of New York and Philadelphia having been directed to the fact that a popular lecturer, named O'Donnell, of California, intended making a tour of the Eastern cities with two Chinese lepers, who were to be shown as instances of the evil results of Chinese immigration, we are glad to learn from the daily press that permission for such exhibition has been refused. It is also said that the lepers are now living somewhere in the suburbs of New York. As so little is known of the con-

* In a report to the Surgeon-General in October, 1874, which afterwards appeared in full in the *Atlanta Medical and Surgical Journal*.

† Reported by Choupe in *Recherches thérapeutiques et physiologiques sur l'Ipeca*, Paris, 1874.

ditions favoring the development and the methods of communication of leprosy, it is impossible to say how much injury might be done by the two lepers in their public receptions: probably the danger would be greater to those who travelled with them in the public conveyances, or who lived in the same houses. It is, however, a well-established fact that dwelling and cohabitation with lepers will cause extension of this incurable disease to those apparently healthy; but, the malady being of slow development, it is uncertain how long exposure to it is necessary in order to communicate it to others. The first principle in the treatment, which has been developed from experience, is complete isolation of the affected from the healthy. This rule is violated by Dr. O'Donnell in bringing the lepers East; and he lays himself open to censure thus on sanitary grounds, quite apart from the moral one of exposing the afflictions of individuals suffering with incurable disease to vulgar and idle curiosity, and making of them an "attraction" to a public lecture.

TAKING POISON IN JOKE, WITH FATAL RESULTS.

A VOLUNTARY physiological experiment with certain pills was recently made by a family living in Philadelphia, who have gained thereby unexpected notoriety. As it is known that the pills contained strychnine, one-twentieth of a grain each, the results are of interest from a medical stand-point. The facts, as published, are as follows. On the 1st of August, Thomas M., 30 years of age, Daniel G., 19 years of age, Annie C., 16, Mrs. Mary K., about 50, and Mrs. Michael B., 45 years old, were seated around the supper-table. Just previous to eating, one of the party produced a box containing about fifty granules, the directions written upon the box being to take one before each meal. The others at the table passed the

box around, each taking some: Thomas M. took nine, the others emptied the box, each taking probably at least five. It is not known how much Annie C. swallowed, but she probably took a larger dose, of at least half a grain, for she died in about three hours, after protracted tetanic convulsions. All the others were also affected in the same manner, with cramps and painful contractions of muscles; but, under medical treatment, they recovered after several hours' suffering. It seems as if the mistake had been caused by the appearance of the granules, which led the company to take them for homœopathic medicine, which is popularly known to be less effective in proportion as the dose is increased,—the less taken of it the better.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

HERE we are nearly at the end of "the season," which has been one of the dullest on record. Everybody was short of the needful; and the death of the Duke of Albany gave many of the patricians an excellent excuse for staying at home and practising economy, instead of coming up to town to spend money. Even the necessity for a whip among the peers to thwart Mr. Gladstone on the Franchise Bill has not brought to town more than a few scores of maimed, halt, and blind to discharge their duty at St. Stephen's, and to do this in a manner as economical as possible. If the different members of the medical profession are looking forward to their wonted autumn holiday, they realize that the expenses thereof will be defrayed from some other source than their "harvest of fees" from this season. If the proposed Medical Bill can survive the opposition of the threatened corporations, it seems endangered by the more important measures which are crowding each other out at the end of a session wasted by obstruction and perverse prevention of progress. If the bantering does struggle through, it will be a strong testimony to the toughness of his constitution. Nor is there anything else to stir the still waters of the medical world. None of the well-known leaders of the profession seem disposed to carry out their long-contemplated retirement, but cling to the fruits of their long labors tenaciously. When the three great medical

baronets and Dr. Quain, who holds a position just alongside them, retire, or are removed by natural causes, there will be no slight scramble among the many younger men who are willing to take their places,—i.e., provided, of course, that the world is disposed to accept them. That something of the kind must happen, and that, too, before very long, is certain. There is many a slip betwixt the cup and the lip, says the old proverb; and who the successful men will be—well, of all the gratuitous ways of courting failure, George Eliot thought prophecy contained the greatest potentialities. The subject which still keeps the greatest hold on the medical mind at the present time is that of tuberculosis of the lungs. The advocates of the view of bacilli being at the bottom of the business are not disposed to abate their claims to a further hearing, and certain facts substantiate their view. Probably the treatment of pulmonary tuberculosis, as a question for a written examination, was never so difficult to answer as at the present day. Never easy at any time, it is a question which at the present widens out into limitless extensions. While there are those who hold a "bacillus blight" the cause *par excellence* of lung-tubercle, there are others who are inclined to look carefully at the prodromus of phthisis, at the conditions of the organism which precede the development of tubercles in the lungs. What is the resistive power which enables one system to withstand the "bacillus blight," while another seems to droop under it like mown grass under a summer sun? If phthisis pulmonalis be the result of the inhalation of one or more of a peculiar bacillus, to destroy these minute organisms is to "cure" the patient of phthisis. But, then, I do not know if any follower of Koch is prepared to propound such a sweeping hypothesis. On the other hand, the production of tuberculosis by the injection of fluids containing the bacillus of tubercle is a fact which furnishes a suggestive light on the obscure subject. Are we yet in a position to say this,—a chronic consolidation of a lung-apex will at least remain *in statu quo*, if not actually clear up to a great extent, provided tubercle-bacilli do not effect a lodgment in the consolidated lung and breed therein? Is that what is really meant when we speak of a person "turning consumptive"? or what is involved by Niemeyer when he says, "Healthy men should never feel sure that they will not die of an acute or chronic catarrhal pneumonia, proceeding from a cold, and resulting in caseous infiltration and destruction of the pulmonary substance"? If it could be shown as probable—we will not ask for it to be proved to a demonstration—that the lodgment of tubercle-bacilli in the consolidated lung-apex is the thing we have most to dread in any case where consumption is "threatened," then inhalations of agents calculated to arrest the de-

velopment of these minute but significant organisms would become as much our bounden duty to the patient as we feel it to be incumbent upon us to check the night-sweats, or relieve a diarrhoea, or to build up healthy tissue by enabling the patient to assimilate fat in some form. That inhalations were adopted in pulmonary phthisis long before the researches of Koch pointed to a specific bacillus, is proved by a copy of Sir Charles Scudamore, "On Consumption," in my possession (which seems to be the copy sent by him to Dr. Latham, or, at least, "a" Dr. Latham). There he speaks of the value of inhalations in pulmonary consumption; the treatise bearing the date of 1830. From cases there recorded it certainly would appear that inhalations, especially of iodine, are of great therapeutic value. The first case he quotes is that of a small-chested youth, with a very bad family history, who was far advanced in phthisis. In addition to general measures, the inhalation of iodine in water at the temperature of 120° Fahr. was advised. Great relief to the discomfort in the chest was soon afforded thereby; the cough was much abated, and the breathing became easier. In a fortnight the general improvement was unmistakable, and the rapid improvement ended in "eventual recovery of health." Now, the *tout ensemble* of such a case points in the direction of a germicide,—of an agent by which these minute bodies are killed, and, consequent upon their demise, the symptoms of consumption abate and ultimately disappear. Such is the interpretation of the case by the light of modern investigations. At the present time, we find chambers provided in which the tuberculous patient can constantly breathe an atmosphere charged with carbolic acid. That in some cases great relief is readily furnished by a residence in such an atmosphere may not be denied; but it is clear that such a line of treatment is only practically possible in cases which can be subjected thereto,—viz., hospital patients. But is the lesson taught us thereby to be ignored as regards private patients? Certainly not, in my opinion, even if such a complete means of application is unattainable. The principle can be adopted, and it seems growing clearer and clearer, that in cases where there are masses of softening tubercle, in which, apparently, the bacillus of tubercle breeds freely, or there are cavities whose walls swarm with the bacilli, inhalations of some germicide seem distinctly indicated. The different respirators now before us would attain this end, just as we find a respirator charged with carbolic acid in a short time "sweetens" a bronchial dilatation which discharges fetid phlegm. The principle is a sound one, and capable of application in most cases.

While it must be admitted that such direct treatment of a case of phthisis is often of priceless value, and, in many cases, essential

to recovery, at the same time it must be borne in mind that the treatment of phthisis is not restricted to any such narrow measure. There is the treatment of the individual as well as of the disease. As regards the management of the case before there are distinct evidences of softening tubercle, the former is, of course, the treatment *par excellence* of the case. It is no good to stand by with folded hands and watch a case of apex-consolidation until there are tubercle-bacilli in the sputum, and then get up all the paraphernalia of an inhalation-chamber for their destruction. To do this would be nearly as bad as the conduct of the one-eyed young doctor who, when called to a case of smallpox, announced his ignorance of pustules, but who was prepared to wage effective war on fits if they appeared; or, as actually occurred in a case which came under my notice lately, where a doctor declined to take active steps in a case of diarrhoea in the tropics until the condition of dysentery was unmistakably developed. There is, to my mind, a great deal to be done before the "bacillus blight" falls upon its victim. There is a general impairment of the health in many instances, which invites the dread intruder to settle down, and which, if improved, would lessen greatly, if not do away entirely with, the risk of an invasion of bacilli,—an invasion not unlike that of the Goths of old when they settled themselves upon the lands of the peoples whom they had conquered, or even more like that of the blighting Moslems upon the lands around the Bosphorus. If the natives could have effectually resisted the invaders in the first instance, all the after-consequences would have been avoided. So in any case where there is apex-consolidation, or where there is reason to fear that soon lung-complication will show itself, the improvement of the general health may hold the bacillus-invader at bay,—in many cases at least. And how this is to be done involves a wide grasp of the case, including the family history. Where there is a history of consumption in the family, it is well for the medical man to take his measures promptly and energetically. To stop all unnecessary outgoings becomes the first duty. A diarrhoea will arrest the attention of the most careless physician; but a leucorrhoea often goes unnoted; and yet it is the drain which lands many a woman in consumption. Night-sweats are a deadly complication, and yet they are often permitted to run on, lowering the state of the patient steadily, until the grave yawns before him, when a little more knowledge—just a very little—would change the aspect of the case entirely. A dose of atropine at bedtime, and, presto! the draining night- or, more often, morning-sweat dries up; and, as the loss of blood-salts is arrested, the patient begins to feel an appetite for food, and develops therewith a capacity for its assimilation. Diminish the outgoings, or, in other words, "the body-

expenditure;" that is ever the first step. Then the next is to increase the "body income." How many phthisical patients can trace their ruin to indigestion! They have lived on fairly well till the day comes when the stomach is upset,—perhaps by taking an ordinary meal when tired, which the stomach cannot deal with; and then the digestion is deranged. The body generally is under-fed; and, if there be already some lung-consolidation, the process of degeneration sets in, and tubercle-softening follows, and then bacilli settle down and finish off the case. Or a loathing of fat leads to tissues defective in fat, and then phthisis shows itself. The most certainly fatal case of phthisis is not, to my mind, that where lung-symptoms develop acutely, but where steady wasting goes on for some time and lung-symptoms only show themselves at the final stage. When that stage is reached, what is the good of any bacillicide, however certain in its action? The patient is played out, simply. A recent writer on consumption has pointed to those early stages where so much can be done if the physician is only on the alert in time. He points out how and by what signs a person may be singled out as likely to become the subject of phthisis, and so the coming mischief be averted. But how to spread such knowledge generally it is not easy to see. It is all very well for a man who has for years been attached to a hospital for diseases of the chest, and who has kept his eyes open when there, to pick out the cases which arouse his suspicions by some hidden, indescribable intuition,—a power given him by experience and observation; but, then, every medical man cannot have this opportunity, and especially the man in an all-round practice, who will see these cases in their first stages. The very man who needs this knowledge is not always the man specially endowed with it. There are, however, broad rules which can be promulgated for his benefit. The present practice of carefully examining the chest has this good effect at least, that the disease, if present, is in all probability recognized. The drawback to this is that, while no case is overlooked, a great deal of unnecessary alarm (and with that that alarm involves) is set up by the discovery of some lung-consolidation, which is really of comparatively little moment. If a patient is found out of health and at the same time there is some apex-consolidation, then the process of putting two and two together follows, and the case is put down at once probably as one of consumption. Much will depend upon the temperament of the medical man: one man is more easily alarmed than another; one man readily takes fright and indulges in a bad prognosis in a case which a more experienced man of a cooler temperament will not regard as serious. It is rarely now that a grave case is treated as a slight one. Then,

if the means of the patient admit of it, he or she is bundled off to some health-resort and at once improves, or, in some cases, does not. In the successful case, of course, the credit of a cure is won; but with a large number of patients this exodus is impracticable; and then what remains to be done? Well, get them away from a clay soil and from areas of defective drainage, to a gravel soil or a chalk down. Then look to the outgoings. If the tongue be red and irritable, then bismuth with an alkali is indicated, with milk with an alkali-water, or with milk extract, or some baked flour, until the tongue is normal; after which (and not until) the diet may be relaxed, and ordinary food can be taken and assimilated. If the tongue be coated, then a vegetable bitter with an acid and some sulphate of soda are indicated until the tongue is clean, after which a chalybeate may be added after food. When the digestive processes are put right, then some cod-liver oil may be useful; but if given before, the oil will only upset the stomach, and so throw the case back, sometimes very seriously. If all this can be carried out at a health-resort, all the better. Too frequently, however, the health-resort is left to do everything, and, as soon as the patient gets away therefrom, then the outward symptoms again manifest themselves, and the patient has to hasten back, or die. If the patient can do the first, life may be maintained for some time; if not, then death results. And all that has been said here applies to cases where there is no softening of a consolidated lung-apex, where there is such softening, and where a cavity tells of a very fast softening. But while the treatment of the individual must never be underestimated in the treatment of a case of pulmonary tuberculosis, I think we have clearly reached a point where the direct attack on the diseased area by medicated inhalations is indicated. If moist râles are heard, and there is some expectoration, and still more when the sputum contains the bacilli of tubercle, then inhalations are distinctly suggested. If, after their use, the lung-symptoms are diminished, and the bacilli are seen to be decreasing in number, then the case may honestly be said to be doing well. Whether tubercle-bacilli are the cause of tubercle, or whether an area of softening tubercle forms a favorable habitat for the bacilli, certain it is that the two have a distinct relation to each other. When the bacilli are seen, the case may be pronounced one of "consumption" as compared to mere "lung-consolidation," and, possibly enough, the presence or absence of the bacilli will be made the test of the nature of the case. But, if so, the appearance of the bacilli will point to the use of inhalations medicated with agents inimical to the tubercle-bacillus, in addition to what is already being done for the individual. Looked at from this point of view, the researches of Koch have a far wider

application than some would assign them, and also bear on practical medicine more strongly than others would allow. The preventive treatment of heightening the resistive power of the system is quite compatible with the direct slaughter of the tubercle-bacilli, and in many cases, no doubt, the two can be combined to the benefit of the patient and the credit of the physician.

J. MILNER FOTHERGILL.

LOUISVILLE, KENTUCKY.

MR. EDITOR,—Some idea of the difficulties in the way of successful medical practice in Louisville may be conveyed to your readers when I tell you that another of our free dispensaries, established by a coterie of our enterprising young and old doctors, has suspended operations. When "medical advice and medicines free" won't catch enough patronage to avoid bankruptcy, what do you suppose is to become of doctors who expect to be paid for their services? Let this be a standing question for solution, please; suggestions welcomed. We fear that, unless we have some good ones, our door-posts, like those of the above-named dispensary, will be decorated with the estate-agent's *Mene, Mene, Tekel*,—"For Rent."

The Louisville Medical Society, though it almost died of infantile tetanus, has begun to show some signs of healthy, vigorous growth. I am determined it shall be heard from for once.

At its last meeting, the subject for discussion, "Uterine Reflexes," was led by Dr. Douglas Morton in a report of a series of interesting cases, presenting many and varied reflex disturbances, wherein examination in all but one failed to reveal even a trace of local pathological change. In one case, a woman 35 years of age, married fifteen years, and without children, was attacked by what appeared to be cerebro-spinal meningitis. Intense occipital headache, opisthotonus, obstinate nausea and vomiting were so severe in the early stages of the case as to require the systematic employment of hypodermic morphia to relieve them, while paroxysms occurred in which the symptoms were much intensified. She had fever, but at no period of the attack, which lasted several months, did it exceed 102°. She finally recovered apparently for about two weeks, when attempts to walk provoked a recurrence. At this stage she consented, not without protestation, however, to an examination, which revealed no particular lesion to account for the constitutional disorder. Irrigation with hot water, followed by the application to the os of the strong tincture of iodine, subdued all the symptoms promptly, and they did not return for a year, when their renewal made the treatment again

necessary; but this time it failed to accomplish a cure. Free discharge was then brought about by the application of nitrate of silver, and she again experienced relief, which she has since enjoyed.

Dr. Morton thought it possible this woman might have had a true cerebro-spinal meningitis in the beginning, which so affected the nervous system as to permit its being easily unbalanced by any local irritation.

A woman, 45 years of age and the mother of several children, had felt her health declining for more than a year. Numbness in the leg, especially at night, made her fear paralysis. Constitutional treatment for several months failed to bring relief. Examination showed no local disease. Still, iodine applied and followed by glycerin tampons and hot-water irrigation resulted in recovery. This woman still menstruated,—irregularly, however. Yet it is interesting to note that a case of this kind recovered under this method of therapeutics.

A woman, 40 years of age, mother of two children, the youngest of whom was six years of age, suffered from occipital headache, dyspepsia, and reduced health generally. Pelvic symptoms were entirely absent. Examination showed the upper portion of the anterior lip of the os affected by granular erosions. Here it was exquisitely tender. There was no enlargement. This case was relieved in a manner similar to the others.

A woman, 24 years of age, with a two-year-old child, suffered from intense abdominal pains, implicating the stomach. Constitutional treatment had failed. Digital examination detected considerable hyperplasia. From the beginning of the treatment a profuse discharge took place from the cervical canal. General improvement followed, and recovery ultimately occurred.

A young woman, 20 years of age, had been in bad health for several years. Dysmenorrhœa and other pelvic symptoms were plainly yet not prominently present. Constitutional treatment had not availed to cure her. Examination revealed ante flexion and corporeal metritis. Local treatment for three months effected more relief than she had experienced for years. She had recently suffered much from dyspepsia, and candor compels the admission that she still suffers from it; but it is improved. Under proper constitutional treatment, she may, since the central irritation is abated, hope for further relief.

Another case, a woman 32 years of age and the mother of several children, had all the pelvic symptoms and signs plainly marked. She was unable to walk but a few feet, suffered from troublesome dyspepsia, and vision was considerably involved. Examination revealed not only a considerable degree of enlargement, but also a marked degree of retroversion. The correction of the latter and appropriate local and constitu-

tional treatment to secure resolution afforded relief.

In commenting upon these cases, Dr. Morton said, "It appears singular that pathological conditions, apparently the same, in different individuals should give rise to such varied and often opposite manifestations, and that in one general disturbances should exist so far surpassing what should be expected to arise from the extent of the local pathological condition, while in another it appears so much less than might be reasonably anticipated." He thought the identity of pathology might be more apparent than real, and that, as our facilities for investigation increase, we may be able to detect differences which now escape us.

It should not be forgotten that these disturbances, continued and sometimes intensified as they are, may give rise to serious structural and functional affections. Thus, palpitation of the heart may end in that condition known as irritable heart. Local treatment, when new centres of irritation have been induced, such as dyspepsia, will not suffice, and the only relief then is to be looked for through a judicious combination of general and local treatment.

In discussing the subject, Dr. W. H. Wathen remarked that while this was a subject of great interest, it was, unfortunately, a subject not very perfectly understood, even by the very best. He thought the difference in the intensity of constitutional disturbance in different women could be accounted for upon the general principle recognized in the word "susceptibility," as applied to all diseases and all persons. There is in some constitutions a predisposition to the development of particular diseases; that predisposition may be handed down from parent to child, obeying the general law of inheritance. In respect to these particular cases, it might be styled the transmission of neurasthenia, which increases the susceptibility or the sensitiveness of the nervous system so that it responds by a reflex manifestation to the least local trouble. This neurosis affects the ganglionic system of nerves especially, and this system supplies all the blood-vessels, even the most minute. A little excitement of it is sufficient to produce a local congestion, it may be in the face or other part of the body, the situation above all others where it is likely to occur being in the uterus and its appendages. This congestion may pass away, or by continuance it may result in so-called chronic inflammation and hyperplasia. This, occurring, enlarges the uterus, increases its weight, and renders flexions more liable to occur.

To relieve this condition when it does occur, there is nothing equal to hot-water irrigation used for weeks and months if necessary, from a gallon to two gallons at a time, and at a temperature of 95° to 110°. It acts at once

as an anæsthetic to the part. Its immediate effect is congestion, but after a few moments the coats of the vessels begin to contract, their calibre decreases, and finally the parts are left in a depleted condition. When persisted in, due attention being given, of course, to constitutional measures to improve nutrition, such cases as those indicated will nearly always recover or be greatly benefited.

Dr. Erwin thought the medical profession in general too apt to refer reflex symptoms to uterine disease without sufficient investigation, forgetting that diseases of other central organs may produce the same or similar manifestations. For example, a middle-aged lady, whose reflex troubles had baffled the skill of several of the best physicians, who had examined and treated her locally and constitutionally, fell into his hands presenting the usual pelvic symptoms, leucorrhœa, back-ache, etc., and, as general reflex disturbance, severe frontal headache, vertigo, acid eructations, etc. An excessive discharge from the os, which had resisted all measures directed at suppression, was present. He examined the rectum, and there found a polypoid tumor attached by a pedicle above the sphincter. This was now removed. The leucorrhœa disappeared, all pelvic symptoms passed away, and the woman recovered entirely.

A young woman, the mother of two children, had suffered for a couple of years from what was regarded as monomania. She had no loss of appetite, no constitutional disturbance, nor other trouble except a constant and irrepressible desire to wash her hands and face. When left alone, she would perform these ablutions all night long. When interrogated as to why she did this, she replied that she had a sense of uncleanness which she could not tolerate, and the frequent ablutions relieved it. Examination revealed an abscess pointing in Douglas's cul-de-sac. This, when relieved, brought relief from the other singular manifestation.

Dr. J. H. O'Reiley said, "In the cases which Dr. Morton has reported, in which local changes were absent, he has still made local applications, on the principle, I suppose, upon which the man recommended his coon-dog. When asked why, he 'lowed everything was good for something, and, as the dog was good for nothing else, he must be good for coons. So, these cases, being referable to nothing else, must be uterine."

"Medical literature," said he, "teems with the history of such cases as have been recited,—as Dr. Wathen has said, their development occurring upon inherited or acquired neurasthenia. Such cases have long ago been explained, and from the lips of Dr. Wathen we have just listened to an excellent elucidation of the subject. Dr. Erwin accuses the gynecologist of the fault of attributing everything to uterine disease. For my part, I would say I should certainly not think of attributing an

irresistible desire to wash the hands and face to the uterus: I should have thought the woman crazy. There are certain head-pains, however, that have always been regarded as of uterine origin. These are the bi-parietal pains, which may, however, arise from obstinate constipation. A persistent occipital pain is almost pathognomonic of cervical trouble. These are different from the common neuralgias, both as to the nature of the pain and the recurrence of it. In the pelvis, however, we have important vesical, rectal, and urethral troubles, as well as uterine, and I recognize the warning as timely; yet good gynecologists recognize these, and, like other good men, are not easily misled.

"There are still other causes than those mentioned by Dr. Wathen concerned in the causation of these troubles. There is what Hodge calls the irritable uterus,—a theory often opposed, but never yet successfully refuted. There is also, generally speaking, in these subjects a want of good red blood and solid muscular tissue. Then there is a periodical congestion too, which usually passes away, but which, failing to do so, as sometimes happens, is one of the most fruitful causes of chronic inflammation. In married women, after laceration, the parts may heal, and in the healing imprison nerve-filaments in the cicatricial tissue. A condition of this kind could not well be recognized through the speculum."

Dr. William Bailey thought that specialists gave entirely too much attention to the treatment of local conditions, and were too much infatuated with specular examinations. He ridiculed the idea that a specialist in eye and ear and throat diseases could recognize in local conditions anything suggestive of uterine disease.

Dr. Preston Scott desired to hear from the specialists present, particularly with reference to the disturbances of vision which frequently occur as reflex manifestations of abnormal conditions. Said he, "It is a fact beyond controversy that gentlemen now present have recognized from the persistent disturbances of vision, without adequate local cause, I suppose, the probability of their central origin and their manifestation through the sympathetic system in local disturbances of nutrition. Dr. Morton has made the proper application in his suggestions concerning the cases he has reported. Yet there is a larger and broader view to be taken of this subject."

"While a large number of the symptoms of general disturbance may arise from local causes, yet a large proportion of them arise from disturbances of the function of nutrition. Woman has a ganglionic system more highly organized than man, and, as she becomes the subject of various nervous disorders, this ganglionic system is more easily unbalanced, and then we find pathological states arising in which the influence of this nerve-state

must be regarded as an important factor. Therefore it is that measures of treatment addressed to the general condition alone often result in a cure without resorting to local measures. There naturally arise two opposite stand-points of observation. One man looks with a single eye through the speculum, and finds that the only method of diagnosis and treatment, while another treats them upon general principles. Happily, both sometimes succeed; unfortunately, both sometimes fail. Therefore, we must not, I think, confine ourselves to either the one method or the other in all cases, but adapt the treatment to the individual case. That treatment then will sometimes be purely local, sometimes purely constitutional, and sometimes a combination of both."

Dr. Dudley S. Reynolds thought there were two important points for consideration in relation to the causes concerned in the production of reflex manifestations: one the disposition or predisposing cause, the other the exciting. The predisposing causes are disturbances of nutrition, which should not be regarded as inherited. It is the one essential and never-absent state in all that class of people who have reflex nervous disturbances. Local mechanical conditions, whether from local congestion making pressure upon nerves, or effusion, or laceration, or inflammation, exert their powers with greater effect then upon this complex and little understood system of nerves.

"The important thing, it appears to me, in the beginning is to look to the improvement of nutrition. The mere inspection of the cervical canal, or that the presence of a flush here or an erosion there constitutes the sum total of the trouble, I doubt. Disturbances of vision are particularly liable to occur in women who suffer from flexions and from ovarian irritation. They are worse during the menstrual period. I have a patient under treatment now who is also under the treatment of one of our best physicians in the department of gynecology. She has a dry throat, cough, exceedingly sensitive pharynx, even to the presence of food. The laryngoscopic mirror, if allowed to touch the walls, gags her, and if persisted in produces emesis. This person is quick in her movements, she does not eat prudently, and bears the other evidences of a neurotic female. She has a flexion of the uterus. While Dr. Mitchell, of Philadelphia, has done much in the interests of this class of debilitated subjects by studying more closely the subject of nutrition and adding somewhat to our knowledge of the best means by which it may be accomplished, it yet remains painfully evident that flexions of the uterus are incurable in most cases. Therefore one of the prime causes of reflex disturbance, made the subject of discussion this evening, it must be admitted, cannot in the present state of our knowledge be removed,

and the field is still open for original research and experiment. Heroic feeding has its advocates, and I am impressed with the idea that better feeding promises more than any local measures yet suggested for the correction of the mechanical causes of hysteria."

Dr. William Bailey thought we should not overlook the fact that woman has nearly the same anatomical formation and nervous system that man has. He believed there was a tendency upon the part of specialists in this department to attribute too much importance to the uterine function. He thought many of these cases should be treated just as we treat men. "I take it," said he, "that, if you will examine carefully, there is scarcely a woman whose uterine functions are all regularly performed or who has not some degree of displacement. Yet thousands of them will go on enjoying perfect health until their attention is called to them by some specialist in this department of practice. While I am not disposed to disregard many cases that are successfully treated by this local method, I believe the majority of them can be successfully treated by means of improvement of the nutrition, disregarding as far as possible the uterine disease. I wish to express myself as decidedly opposed to the very frequent use of the speculum. The hot water will often, no doubt, of itself accomplish all that can be hoped for in the way of local treatment."

Dr. Wathen agreed with Dr. Bailey that local applications are often made when there is no necessity for it. He had often, he said, had women apply to him for local treatment for ulceration. "Ulceration," said he, "very rarely exists, unless it is specific or cancerous," and examination in these cases has revealed oftentimes that no ulceration existed. Thus an examination made by a competent man is often sufficient to make the nature of the case clear and the necessity for non-interference in this way apparent. Instead of specialists, who understand their business, making these frequent applications when unnecessary, it will be found more frequently that it is those opposed to specialism who do it. There are cases in which you might use hot water and almost everything else without doing good, yet applications of the particular kind required may bring complete and permanent relief.

"As regards the ability of the specialist to determine the probable existence of uterine disease by an examination of the throat, I wish to refer to just one case, though I might cite many others. I very seldom examine unmarried females, yet I do so occasionally. Something like a year and a half ago, a young woman who lives in the country, and who had consulted Dr. Kelch concerning her throat and lungs, came to my office bearing a note from him which stated that, from the condition of things presented on inspection of the throat, in conjunction with other symp-

toms, he suspected that trouble of some character existed about the uterus. She presented many of the symptoms of consumption, but none of the physical signs. She had a dry, irritable throat, and a constant cough. A brother had died the preceding year of what was said to be consumption, and, as she was the only remaining child, her parents grew very anxious about her. I acted upon the suggestion, made an examination, and found an abrasion of the os probably as large as a ten-cent piece. Under appropriate local treatment she soon recovered vigorous health, and remains well to this day. Beyond painful menstruation, this young woman presented no pelvic symptoms that would call attention to that region as the seat of disease."

Dr. J. H. O'Reiley reported a case of spurious pregnancy, in which the woman had carried her hallucination to the date of confinement, and also a case of marginal attachment of the placenta. Barnes's dilators were used. The woman recovered.

ALLEN KELCH, M.D.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

TUESDAY EVENING, June 12, 1884.

THE PRESIDENT, Dr. TYSON, in the chair.

Sarcoma of testicle. Presented by Dr. G. DE SCHWEINITZ.

A. K., aged 43, a native of Germany, married, presented himself May 22 in the Surgical Dispensary of the University Hospital for an opinion concerning a tumor of the left testicle with which he was suffering. His general health had always been good until one year ago, when he first noticed a beginning globular swelling of the left testis. A short time previous to this he had suffered with gonorrhœa, which was followed by an attack of orchitis. He knew of no member of his family that had ever been afflicted with any form of morbid growth. Examination revealed a very large, somewhat pear-shaped growth of the left testicle, over which the skin was freely movable. The veins were much enlarged. The inguinal glands of the left side were also involved, and the thigh and leg of that side swollen from œdema. Above the line of Poupart's ligament both palpation and percussion revealed another mass situated in the left iliac fossa. A very unfavorable prognosis was given, and operative interference not advised. He, however, earnestly begged for the removal of the tumor of the testicle, which caused him severe dragging pain and incommoded him in walking. The dangers of the operation, and the fact that it would at best only be partially palliative, were ex-

plained to him, and, as he still asked for its performance, the growth was removed. The case progressed very well for a few days, when he died rather suddenly. Dr. Hughes and myself made the post-mortem examination, and found the following conditions. Lungs showed commencing phthisis of apex, left pleural sac occupied by a pint of serum, in which floated some flakes of recent lymph. Heart normal, cavities occupied by post-mortem clots. Liver very fatty. Right kidney apparently normal. The retroperitoneal glands were all converted into a huge sarcomatous mass, as were also the glands and tissues of the left iliac region, and from there the growth passed up to the lumbar region, and surrounded, although apparently did not greatly involve, the kidney. Upon cutting into the tumor of the testicle, about a pint of bloody serum escaped from the cavity of the tunica vaginalis. The growth occupies the body of the testis, is soft and friable, in places breaking down, and the cavities thus formed filled with semi-fluid contents. The growth has burst through the tunica albuginea, thus showing the first step in the march of this morbid process up the spermatic cord into the abdominal cavity to the retroperitoneal glands and other tissues involved by the disease.

Microscopically, the tumor is a sarcoma, composed of round and spindle cells, which are in relation to the remnants of connective-tissue stroma. A very distinct tendency to alveolar arrangement is observable in places. It would probably be classed by some pathologists as an endothelial carcinoma or carcinomatous sarcoma.

Dr. Shakespeare said that the history of this case, the post-mortem finding, and the microscopical examination forcibly reminded him of the last discussion by this Society of the same subject. In this case the disease has evidently travelled along the deep lymphatics as far as the retroperitoneal lymph-glands of the lumbar region. In this particular it has followed the course of systemic infection pursued by a carcinoma rather than a sarcoma. But it seems to be now well established that the well-known law governing the generalization of sarcomata meets with frequent exceptions in the case of so-called sarcoma of the testicle. Dr. De Schweinitz had spoken of the presence in this tumor of an alveolar structure, and in truth the manner in which the growth had exceeded the bounds of the testicle brings to mind at once the history of an alveolar sarcoma. The reporter had spoken of this tumor as "an endothelial sarcoma." Dr. Shakespeare objected to this use of the term "endothelial," and thought that the tumor in question would be more properly defined as "an alveolar sarcoma." He thought that the term "endothelial" was most commonly applied to carcinomata of certain kinds rather than to sarcomata, and did not think that the tumor named by Klebs "an

endothelial carcinoma" differed from other genuine carcinomata in the form or nature of its cells and alveolar structure, but only in the fact that it may originate or be propagated in the lymph spaces or channels. If the term "endothelial" be insisted upon in this case, why not call the growth "an endothelial carcinoma"? This naturally raises the question of pathogenesis. We are told that the testicle is a derivative of the mesoblast. If this be true, there is ground for debate as to the proper name to give a tumor of the testicle which has an alveolar structure and a clinical history analogous to that of true carcinoma. He who believes that true carcinoma never has a real connective-tissue origin will not consent to call such a growth of the testicle a carcinoma unless he can satisfy himself that, by some chance, a few epithelial cells from the blastoderm have become misplaced in the process of development and have remained here to form a nidus of a future carcinoma.

Malignant tumors of the testicle seem to occupy an anomalous position. They are called sarcomata in the main, and yet, as a rule, their clinical history does not correspond to the sharp outlines which distinguish this class of tumors in other localities. On the whole, Dr. Shakespeare was inclined to agree with those writers who accepted in general a connective-tissue origin for true carcinoma in contradistinction from the epithelial origin of true epitheliomata, and therefore saw no well-grounded objection to applying the name of true "carcinoma" to those growths of the testicle which present a typical clinical history and anatomical structure of carcinoma, although they may spring from connective tissue. As bearing upon the subject of pathogenesis of carcinoma, he referred to the observations of a few authors who deny the epithelial origin of some glandulous structures, mentioning in particular the opinion of Creighton, who, after a careful and extensive series of observations on the development and involution of the mamma, concludes that the acini of this gland are not developed from the cutaneous epithelium, but are derived from the connective tissue.

Carcinoma ventriculi. Presented by Dr. J. C. WILSON.

The specimen was removed from the body of A. C., aged 58 years, a native of Ireland, and a washer-woman by occupation, who was admitted to the Philadelphia Hospital March 6, and died June 2, 1884.

The symptoms of the disease first attracted the patient's attention six months before her admission to the hospital, and were indigestion, flatulence, acid vomiting at intervals, constipation of obstinate character, and, later, starvation-signs, wasting, extreme pallor, a dull, muddy skin, and great feebleness. About the time of her admission a small, hard, ob-

long tumor made its appearance to the right of the median line, just above the navel. This tumor was movable, but not the seat of pain. In fact, pain was rarely present. Death resulted from exhaustion. Upon post-mortem examination, the stomach was found to be greatly dilated, extending down almost to the pubes. A cancerous mass was evident from the serous surface, presenting a nodule about the size of a hen's egg. Upon section, the pylorus was found to be very much contracted from the new growth, which was a scirrhus cancer undergoing colloid change. The mucous membrane of the stomach showed numerous ecchymoses of varying extent, and the changes due to chronic catarrhal gastritis. No metastases to other organs could be discovered, and the lymphatic glands were not enlarged. The organs were all much atrophied, otherwise normal. Slides showing the microscopic appearances of the tumor were exhibited.

Aneurism of the left ventricle communicating with the aorta. Presented by W. E. HUGHES.

T. C. White, æt. 39 years, a ship-carpenter, was admitted to the University Hospital under the care of Dr. E. T. Bruen, March 6. He had always worked hard, been much exposed to weather, was a fairly-temperate man, and had never had syphilis. He had had several slight attacks of articular rheumatism, but during none of these attacks had there been any symptoms referable to the heart. There was nothing of moment in the family history. Three years ago, his strength, which had never been excessive, failed somewhat, and it became impossible for him to work constantly. Previous to this, while he had never been very robust, he had yet been able to work regularly. There was with the failure of strength more or less dyspnœa on exertion, with a tendency to take cold on any slight exposure, but no pain over the heart, and very little palpitation. Six months ago he was very much exposed, and since then has been much worse, palpitation now for the first time becoming troublesome. When first seen, the slightest exertion caused the most intense dyspnœa and very annoying palpitation; his hands and face were congested, and his lungs filled with moist râles. The apex-beat of the heart was in the fifth interspace in the nipple-line, its action strong and heaving. Over the aortic cartilage could be heard a strong, blowing, double murmur. He died April 5, of gradually-increasing dyspnœa, due apparently to congestion of the lungs. He had never complained of pain in the heart. There had been no œdema. *Autopsy*, by Dr. Barber, six hours after death.—Pericardium normal. Heart large, its left ventricle moderately hypertrophied and dilated; right normal; muscular tissue apparently normal. Between the posterior leaflets of the aortic

valve was an oblong opening, with smooth, rounded edges, extending one-quarter of an inch above the point of juncture of the leaflets into the aorta, and one-half of an inch below into the wall of the left ventricle, much wider in the ventricular than in the aortic wall. This opening prevented the approximation of the leaflets, holding them at least one-quarter of an inch apart, and permitting free regurgitation of blood into the ventricle. The leaflets were attached along the opening; in fact, above they formed its edges. This opening led back into a cavity about as large as a walnut, lying between the base of the aorta and the upper part of the left ventricle on the one hand, and the right auricle on the other, bulging decidedly into both auricle and aorta. Its lining membrane was continuous with the endocardium, and was thickened and roughened, but not calcareous. The endothelium of the posterior wall of the aorta covering the projection was also somewhat thickened and roughened. Between the upper part of the sac and the aorta, where the separating tissue was very thin, composed apparently of only two layers of endothelium, there was an irregular tear, permitting free intercommunication between the sac and the aorta. Between this tear and the upper margin of the opening described above was a bridge of firm aortic tissue. The endothelium of the right auricle over the sac was rough and thickened. The wall of the sac was formed of connective tissue and endothelium; it contained only some recent coagula, none that were laminated. The coronary artery arose immediately above the sac, and was not involved in it. The leaflets of the aortic valve were perfectly healthy. Other valves normal. The endothelium of the heart showed no spots of degeneration except that mentioned in the right auricle. The aorta, above the sac, as well as the coronary arteries, was not in the slightest degree atheromatous. Both sides of the heart contained some chicken-fat clots. Lungs deeply congested. Other organs normal.

Aneurisms of the aorta—Empyema.—Presented by W. E. HUGHES.

J. H., white, æt. 35 years, a shoemaker, was admitted to the University Hospital, under the care of Dr. E. T. Bruen, December 26, 1883. He has used alcohol decidedly to excess, but has never been much exposed to weather, and has never done any hard work. There is no history of venereal disease. There is a distinct family history of rheumatism, and he himself had, twelve years ago, acute articular rheumatism. Since then he has had occasional fugitive pains, principally in bad weather. Fifteen months ago he caught cold, and soon after began to feel slight pains along the crest of the left ilium. The pain increased for four days, when it had become almost unendurable, and extended

from the left loin along the crest of the ilium into the groin. His urine was passed frequently and painlessly in small quantities, and contained no blood. The pain was ameliorated by treatment, but not wholly removed, though there was not enough to keep him from following his usual occupation. It was almost invariably aggravated by damp weather, and was not decidedly influenced by motion. Twice since then he has had paroxysms of severe pain; and each time, after taking a mixture containing oil of turpentine, urination has been frequent and painful, and the urine has contained blood. For the last two months he has had more or less stitch-like pain at the base of the left chest, and a hacking cough. His general health has been failing only slightly; he thinks he has lost about ten pounds of flesh. On admission, his face was pinched and anxious, his breathing rapid and shallow, with intense pain at the base of the left lung. Physical examination showed friction-sounds at the base of the left lung, with evidences of a small amount of fluid in the left pleural cavity, collected posteriorly. The respiratory murmur over the upper part of the left lung was not quite so distinct as that over the right. The apex-beat of the heart was not ascertainable with certainty, but seemed to be a little outside the normal point. The sounds at the apex were indistinct; and synchronously with the systole was a rubbing sound, heard only during inspiration. Towards the base of the heart was developed a harsh systolic murmur, best heard over the upper bone of the sternum, conducted feebly into the carotids, and not heard posteriorly. The heart-action was too strong, the whole pericardium heaving. The normal area of aortic dulness over the upper bone of the sternum was somewhat widened. He complained of a constant dull pain running from the left loin along the crest of the ilium. Urination was normal, and the urine contained no abnormal constituents. Under the use of salicylate of sodium the pleuritic pain was quickly relieved. The lumbar pain completely disappeared after a course of alkaline diuretics. The fluid in the left pleural cavity slowly increased for a while, then remained stationary till one week before his death, when there was a rapid increase. The pleural friction-sounds came and went. The friction-sounds heard over the heart were even more variable, sometimes systolic, sometimes double, occasionally dependent on the respiration, and again occurring regularly with every beat of the heart. Gradually to the left of the sternum, in the second and third interspaces, a new centre of pulsation developed, apparently distinct from the cardiac impulse, and over this area resonance was impaired. Two months after he was first seen, a systolic murmur was detected about the middle of the posterior border of the left scapula, distinct from the murmur heard an-

teriorly. Coincidentally with the development of these conditions there was a steady decrease in the amount of air passing into and out of the left lung. There was no other pressure-symptom. For a month before he died he had irregular rises of temperature, with profuse perspiration, and lost flesh rapidly. April 22, Dr. Wharton introduced a tube into the left pleural cavity, through which a large amount of sero-pus drained off. He died April 27.

Autopsy, twenty-four hours after death.—Body much emaciated. In the sixth interspace, one inch anteriorly to the mid-axillary line, is an opening leading directly into the left pleural cavity, which is filled forward to the anterior axillary line and upward to the spine of the scapula with a sero-purulent liquid surrounded by walls covered with a pyogenic membrane. The lung occupies the remainder of the pleural cavity, and is everywhere closely adherent; it is compressed. The fibrous tissue is increased, and there is slight catarrh of the bronchial mucous membrane. The pericardium is dotted with scattered patches of recent lymph, and its cavity contains three ounces of flaky serum. The heart is somewhat enlarged, the valves perfectly normal. The aorta is dilated, its endothelium proliferated, roughened, and in places calcareous. Springing from the arch posteriorly to the origins of the left carotid and subclavian arteries is an aneurism the size of a filbert, extending back into the connective tissue to the left of the trachea. At the end of the descending part of the arch is another aneurism, as large as a peach, springing from the right posterior surface of the aorta, eroding the anterior face of the bodies of the fifth, sixth, and seventh dorsal vertebræ, pressing forward and almost occluding the left bronchus. It has ulcerated through the wall of the bronchus, but exudation of blood has been prevented by a firm laminated clot which fills this opening. There was no pressure on the œsophagus or on nerves. At the origin of the cœliac axis is another aneurism, half as large, pretty well filled with laminated clots. Kidneys and other organs healthy.

THURSDAY EVENING, JUNE 26, 1884.

THE PRESIDENT, Dr. TYSON, in the chair.

Specimens from a case of resection of the humerus. Presented by Dr. NANCREDE.

MARY D., æt. 17 years, from whom these specimens were removed, received a severe compound comminuted fracture of the left humerus by having her arm wound around the main shaft of a spinning-mill's machinery on January 2, 1884. She also, at the same time, received several severe scalp-wounds. Irrigation with bichloride of mercury solution resulted in the salvation of the

arm, although in the effort the girl nearly lost her life. At the end of six weeks, no union having taken place, the ends of the fragments being necrotic, I cut down, removed the small fragments here presented, and, after sawing off the ends of the main fragments, drilled and fastened them together with two stout silver wires. The whole extremity was then put up in a fixed apparatus (plaster), which was not disturbed until irritation of the skin from pressure, etc., required it. Now, at the expiration of about five months, the fragments seem firmly consolidated, with the line of the bone apparently perfect.

Microscopic studies from a case of spindle-celled sarcoma of the breast. Presented by Dr. G. DE SCHWEINITZ.

I desire to exhibit a few sections this evening cut from a tumor of the breast removed by Dr. John Ashhurst in the University Hospital. The history of the case in brief is as follows: Annie S., married, aged 35, the mother of four children. Family history good. Her own health good until two years ago, when she began to suffer from malaria. The tumor of the breast first began to be manifest one year ago, and grew gradually, without much pain, until the late operation, when it had attained the size of an orange. There was no enlargement of the axillary glands. The nipple was not retracted. The growth to the touch was hard, and in spots the skin had become adherent, giving rise to the pitted, somewhat brawny or lardaceous appearance which is described by surgical writers as rather indicative of scirrhus of the breast. This appearance was sufficiently marked to cause the diagnosis of hard carcinoma to be suggested as probably correct. After removal, when the mass was laid open, both its surfaces did not appear concave, as is usually the case in a scirrhus. Microscopic examination cleared up the diagnosis, for, as you will see by examining the specimens, they show the typical appearances of a small spindle-cell sarcoma. It seemed a good case to illustrate the difficulties sometimes encountered in correctly diagnosing tumors of the breast, and for this reason I have briefly placed it upon record.

COLLEGE OF PHYSICIANS.

AT a meeting held June 4, 1884, the President, Prof. J. M. DA COSTA, in the chair, Dr. WHARTON SINKLER read a paper on

"A FORM OF NUMBNESS, CHIEFLY OF THE UPPER EXTREMITIES."

For several years I have observed in my service at the "Infirmary for Nervous Diseases" in this city, and occasionally in my private practice, quite a large number of pa-

tients whose prominent symptom was numbness of the hands.

The symptoms in these cases are quite regular and constant in their general characters. The patients are usually women,—at about the change of life,—although cases may occur in men, as will be seen from the instances given below.

The numbness generally begins in one or both hands and gradually extends up the arms. It may be felt in the feet and legs also. It is almost always most marked in the morning before the patient rises.

It is described as a "tingling," and "like pins and needles," or as if the limb "were asleep."

One patient, in whom the numbness was felt in both the upper and lower extremities, said she felt like "a sleeping fool." Notwithstanding the numbness, there is but little loss of feeling to touch or pain, and usually the compass-points are distinguished as readily in the affected part as in other portions of the body.

The numb member is weak, but there is no paralysis, and the weakness is transient. Often there is pain associated with the numbness. The patients sometimes think the hands are swollen at the time when the numbness is most marked.

I will give briefly the histories of some typical cases of the affection. It must be borne in mind that I do not consider all cases of numbness as coming under this head. There are many cases of numbness met with which are not dependent upon organic lesions of the nervous centres and yet differ from those which I am now considering.

Case I.—Hannah R., æt. 30 years, single, coat-maker, applied at Infirmary for Nervous Diseases February 6, 1872. Complaints of numbness and pain in both hands and arms. It began three weeks ago in the hands, and the attacks now extend above the elbows. They are induced by sewing, and also come on at night. The numbness and pain begin in the ulnar distribution of the right hand, and then extend to the rest of the hand and up the arm. In the left hand it is confined to the forefinger. Sensation is accurate in the affected regions. The ulnar distribution is affected readily by slight pressure over the course of the nerve. Some tenderness over the median nerve.

There is no spinal tenderness. The pulse is feeble, and there is a slight murmur heard at the base of the heart. There is some rheumatic stiffness of both wrists, and decided difficulty in moving the right shoulder.

Under the use of galvanism and a very strongly stimulating liniment to the arms, the patient was entirely relieved of the numbness and pain.

Case II.—Letitia M., æt. 48 years, applied at the Infirmary for Nervous Diseases July 5, 1878.

Has always been a healthy woman, and has no history of rheumatism. About one year ago noticed numbness in the right hand, at first in the thumb and first and second fingers, and occasionally in the other fingers. In the beginning it was felt only in rising in the morning, but latterly it has remained all day in the first and second fingers. It is always worse in the morning. About two months ago, she noticed pain at the base of the thumb like a sprain. It comes on with any movements of the arm, and ceases when the limb is at rest. Any movements which require pressure with the thumb bring on pain. There is slight pain on pressure over the median nerve. Sensation to touch and the compass-points in the hand and arm are normal.

Case III.—Catherine O'C., æt. 50, washer-woman, applied at the Infirmary for Nervous Diseases June 22, 1880. Catamenia have ceased for some time. Six months ago began to have numbness in the left hip, which extended down the leg. Has had an attack in the right hand. It is worse in the mornings. Dynamometer, right 90, left 70.

Ordered ext. ergot. fld. gtt. xx t. d.

July 14.—Returns, saying that she is much better.

Case IV.—Mary M., æt. 60 years, applied at the Infirmary for Nervous Diseases September 15, 1880. Two years ago was cutting grass with scissors, when she injured the forefinger of the left hand. This was followed by numbness of all the fingers, and extended up the arm. The numbness and tingling are now in both arms. It is also felt in the legs. It is most marked at night when the patient is in bed, especially if she lies upon her back. The sensibility of the fingers is good, but there is slight loss to compass-points. The numbness is most marked in the second and third fingers. The hands feel weak. Dynamometer, right 80, left 85. Ordered ext. ergot. fld. flʒss t. d.

October 13.—Much better. Dynamometer, right 100, left 100.

Decrease ergot to gtt. xx t. d.

26th.—Not so well. Increase dose of ergot to gtt. xl t. d., and apply mustard-plasters over spine every night.

December 8.—Dynamometer, right 115, left 100. Numbness very much less.

The patient continued to improve, and when last seen, in May, 1882, stated that she was greatly relieved of the numbness, although it still occurred at times. If she allowed the arms to lie close by the sides when asleep, they became numb. If they were extended this did not take place.

Case V.—Mrs. B., æt. 50, nurse, applied at Infirmary for Nervous Diseases November 25, 1881. Menopause eighteen months ago. Is in good health, with the exception of numbness of the hands, which began several years ago. There is no assignable cause for

the numbness. The numbness is always in the ulnar distribution, and occasionally in the median distribution of hand, and extends up the arm. It is decidedly most marked in the left hand and arm, and is occasionally felt in the left foot. The position of the arms had no influence in bringing on an attack of numbness, but prolonged exertion of the arm will induce it. There is always loss of power of the arm after the numbness has passed off. The dynamometer shows a difference of 20° in favor of the right hand. The patella reflexes are good; heart normal.

Case VI.—Mrs. J., æt. 51, applied at Infirmary for Nervous Diseases February 18, 1884. Two years ago used her right hand very much. Then began to have numbness in the fingers and hand. Following this, there was a burning pain. Her general health has been good, but she sleeps badly. The numbness begins in the fingers, and it is followed by a burning pain which also begins in the fingers and extends up the arm as far as the elbow. It is most frequent in the early morning.

There is slight tenderness on pressure of the ulnar nerve at the elbow.

No loss of sensation to touch or to compass-points. Dynamometer, right 80, left 95. Ordered ext. ergot. fjd gtt. xx t. d.

February 25.—Returned, saying that the numbness and pain are much relieved. Continued same treatment.

March 10.—For the past few days symptoms have been worse. Is sleeping badly. Ordered to stop ergot and take sodii bromid. gr. xv t. d.

April 17.—Reports that she was not so well while taking bromide. Returned to ergot of her own accord yesterday, and slept well last night. The numbness is also much less.

Case VII.—Mrs. M., æt. 50, widow, consulted me July 13, 1881. Has enjoyed good health and worked hard until recently. Catamenia regular until three years ago. Then she began to have numbness and pricking of the feet, with starting of the legs, while in bed. The numbness then extended to the hands and arms. Numbness is now worse in left arm, but a month ago the right arm was most affected. The wrists are painful and feel as if sprained. If the arms hang down, the numbness is increased. The hands and legs become swollen. She has frequent "flushes of heat" through the whole body, and she then becomes flushed and warm, the sweat starting out freely. Her sleep is interrupted by the starting of the legs. She is a stout, florid woman; has a good appetite, and no dyspepsia or constipation of the bowels. The urine was found to be free from albumen. She is very nervous, and often has headaches. The symptoms were markedly relieved by bromide of sodium and ergot.

Case VIII.—Charles E. S., æt. 34, carpenter, applied at the Infirmary for Nervous Dis-

eases August 30, 1878. For a year he has had a sense of general fatigue, and for several months has had pain in the right shoulder. He has worked very hard, both mentally and physically, for some years. Since last fall has felt very sleepy all the time. A few days ago noticed twitching of the right hand, and at night was awakened by pain and numbness in the palm of the hand and twitching of the fingers. Since that time the numbness and pain have continued, but are worse when he lies down, so that he is prevented from sleeping. He has had pain in the cervical region of the spine. The patient is obliged to use the right hand a good deal, as, for instance, in planing, and this brings on the attack of pain and numbness. On examination, no twitching is seen, but the patient says there is a feeling as if the fingers were twitching. There is no loss of sensation in the right hand to touch or compass-points. The right hand has become weaker. Dynamometer, right 130, left 130. Appetite poor; tongue furred; tendency to diarrhœa. The urine is free from albumen. Ordered potassii iodid. gr. x, vin. ergot. f3j t. d.

September 6, 1878.—Is better. Can sleep now, but is awakened about 5 A.M. by pain and numbness in the right arm and shoulder.

11th.—Improving, but the early morning pain and numbness continue. Increase wine of ergot to f3ij t. d.

18th.—Now sleeps very well. No early morning pain and numbness.

This patient remained under treatment at intervals until September, 1881. He had occasional relapses,—the attacks being almost invariably brought on by over-use of the hand. At times the numbness extended to the right leg. The pain in the back of the neck was sometimes felt. The last note of the dynamometer was—right 155, left 150. The treatment consisted in the free administration of ergot, and, after the subsidence of the symptoms, phosphorus, strychnia, and iron were given for long periods. Blisters were applied on the cervical spine several times.

Case IX.—Mr. H. P. M., æt. 30, married. This patient had an attack of poliomyelitis anterior to 1877. I reported his case at length in the *Amer. Journ. of the Med. Sci.* for October, 1878. He made a complete recovery from the paralysis, and enjoyed excellent health until March, 1883. At this time he came to me complaining of numbness in the hands. The attacks came on in the early morning, and would waken him from sleep. At first he ascribed it to sleeping with his arms extended above his head, but it continues to occur no matter in what position the arms are. The patient is in good general health. No indigestion or rheumatism. The sensation in the hands is normal; the grip is weaker than before the numbness began. Dynamometer, right 156, left 120. He complains of an area of coldness in the right

thigh above the knee. There is no anæsthesia or numbness in this region.

This case was treated at first with iodide of potassium and massage, and later with strychnia. The symptoms were gradually relieved, and the strength of the hands returned. On April 7, 1880, the dynamometer marked right 160, left 130.

He still had occasional returns of numbness until October, 1883. At this time, however, the numbness was confined to the tips of the fingers, and did not disturb him until late in the morning.

Mr. M. consulted me again on March 17, 1884; he stated that he had remained free from numbness until lately. The attacks came on as before,—*i.e.*, in the early morning, waking him at about 5 A.M. The numbness is worse in the right hand, and this hand is relatively weaker than the left. Dynamometer, right 142, left 136.

The hands feel as if they were swollen in the early morning.

Ordered ext. ergot. fld. gtt. xxx t. d.

April 4.—Patient reports improvement. Numbness comes on later in the morning. Now ordered strychniæ sulph. gr. $\frac{1}{50}$ t. d. Ergot stopped.

26th.—Better; sleeps until 6 A.M., but is then awakened by the numbness. Stop strychnia. R Syr. d'ergotinine (Tanret's) f3j t. d.

May 6.—Patient thinks last prescription has had more decided influence in relieving the numbness than anything he has taken; the numbness comes on later every day. Dynamometer, right 158, left 142.

18th.—Patient now has no numbness.

It will be seen that of the female patients whose cases I have given their ages were between 48 and 60 years, with the exception of one who was 30 years. In this case the disorder was induced by the nature of her work, which was constant and hard sewing. The ages ranged as follows:

I aged 30 years.	I aged 51 years.
1 " 48 "	1 " 60 "
3 " 50 "	

In two patients, Cases I. and VII., there were evidences of rheumatism, but in none of the others were there any symptoms of rheumatic trouble. In Cases I., IV., and VIII., the origin of the trouble seemed to be in over-use of the limb first affected. Indeed, in Case VIII. the affection at first seemed like a low form of an ascending neuritis, but afterwards the symptoms were more general.

Most of the patients were in good general health, but some were anæmic or overworked.

The numbness in most instances was in both arms; occasionally it was found in all of the limbs, and in three cases in one arm alone. The ulnar and median distributions were most frequently affected.

Pain was associated with the numbness in

several patients. It was not an acute pain like neuralgia, but, as one patient expressed it, like the pain which comes when a limb is getting over being asleep. Tenderness over the ulnar or median nerve was observed several times. There was usually some loss of power in the parts involved, the dynamometer showing several degrees' difference between the hands in the cases when only one limb was affected. The duration of the affection was from a few months to several years. One of the patients had suffered from the disorder for two years before coming under observation, and at the end of a year and a half still had occasional attacks.

Dr. Weir Mitchell, in a lecture on "The Symptom Numbness,"* and later in a chapter in his work on "Diseases of the Nervous System," has described several varieties of numbness. Most of his cases were in anæmic or hysterical persons, and the symptom yielded under a course of treatment which tended to improve the nutrition and *morale* of the patients. He refers to cases in which the numbness came on during sleep, and remarks that this is a form "which belongs to the night." He finds that the numbness in the cases he has seen is frequently hemiplegic in character, and alludes to the fact that "some persons who have gotten pretty well of a hemiplegia of organic cause are liable to waken out of sleep with numbness and lessened power of the side once palsied."

Dr. James J. Putnam, in a paper read before the American Neurological Association,† treats at length of a series of cases of "paræsthesia, mainly of the hands." He bases his paper upon the notes of thirty-one cases, and the description he gives resembles those which I have related. He finds that most of his patients were women, and almost all were in middle life, but he does not remark upon the fact that they were about the period of the menopause.

Dr. Putnam suggests that the possible cause of the affection is "alterations of the blood-supply of the smaller branches or terminal filaments of the sensitive nerves supplying the affected districts."

The treatment of this writer consisted in the use of galvanism, phosphorus, strychnia, bromide of potassium, and several other drugs. He did not think that he had had sufficient opportunity to test the value of the different remedies, but seems to have found phosphorus of more value than any other one means used.‡

Dr. J. A. Ormerod has described twelve cases§ which very closely correspond to those which have come under my observation.

* Med. and Surg. Reporter, December 2, 1876.

† Archives of Medicine, vol. iv. No. 2, October, 1880.

‡ In a note recently received from Dr. Putnam, he says that he has lately found lead in the urine of one of the patients referred to in his paper, and thinks that it should be looked for in all cases of numbness.

§ St. Bartholomew's Hospital Reports, 1883.

All of his patients were women, and the attacks of numbness began to come on about the cessation of the menses. Three of his cases were rheumatic, and in some the trouble proceeded from the nature of their work. Bromide of potassium afforded marked relief in many of the cases. Dr. Ormerod compares this affection to the deadness of the fingers which some persons experience after exposure to cold, and therefore ascribes it to vascular spasm.

It has seemed to me that in these cases there is probably a condition of hyperæmia either of the nerve-trunk or of a portion of the cord. In some cases I think the hyperæmia is confined to the nerve-trunks or to some of the terminal filaments of the sensory nerves, but in others it seems not unlikely that the cervical enlargement of the cord becomes hyperæmic or congested, from the fact that the numbness is often bilateral. The circumstance that the affection comes on at night seems to me to strengthen the view of the pathological condition being one of hyperæmia, for the supine position favors an increase of blood in the cord and the nerves of the extremities. I have seen patients in whom the numbness would come on if they lay down and fell asleep even for a short time in the day.

Women at the change of life are more prone to hyperæmias and congestions than at other periods of life, and they are the most frequent subjects of this form of numbness.

In several of my cases ergot gave marked relief, and Dr. Ormerod found bromide of potassium the most successful therapeutic means he used. Both of these remedies are believed to diminish the blood-supply in the nervous centres. It is true that Dr. Putnam found phosphorus the most useful drug in his cases, but in one of those which he reports the remedy failed, and another was relieved by bromide of potassium.

From my experience in these cases I should say that the prognosis in middle-aged women was not good for permanent relief. The numbness can generally be greatly benefited or stopped for the time, but it is liable to return. In those cases where the trouble has been induced by overwork of the part, one can almost surely promise permanent cure if the cause can be removed.

With regard to treatment, as indicated above, ergot has proved the most useful medicinal means I have employed. Massage and spinal galvanism are always useful adjuvants, and so are all means which improve the general health. Bromide of potassium has helped some of my cases, and one patient was much benefited by sinapisms over the spine. It was found advantageous in most of the patients to give strychnia for a time after the disappearance of the numbness.

REVIEWS AND BOOK NOTICES.

ARCHIVES OF OPHTHALMOLOGY. Edited by Dr. F. KNAPP, of New York, and Dr. C. SCHWEIGGER, of Berlin. Vol. XIII. No. 1. G. P. Putnam's Sons, New York.

This number opens with an article on the "Development of Glaucoma," by Dr. Mooren, of Düsseldorf. As might be expected, it shows the marks of enormous experience and great clinical powers of observation. We note the following points: (a) Glaucoma may be associated with a degenerative form of optic neuritis; (b) it is sometimes impossible with the ophthalmoscope alone to distinguish between the atrophic and glaucomatous excavations; (c) an "immense number of iridec-tomies" have been made for "glaucoma simplex" which never should have been performed; (d) the blood-vessels play an important part in the genesis of glaucoma; (e) the excavation is produced principally by the degeneration of the nerve-tissue; the degree of pressure has comparatively little to do with it. Then follow three papers by Pagenstecher, of Wiesbaden: (a) "Contribution on Orbital Cellulitis." Carious teeth may give rise to orbital cellulitis; illustrative cases are given. (b) "Retro-ocular hemorrhage." This was the result of an injury; ophthalmoscopic observations are recorded and are of great value. (c) "Injury of the Eye by Lightning." In this case there was impairment of the dilating power of the iris, opacities of the crystalline lens, and an obscure affection of the optic nerve. Dr. George S. Norton reports "A Case of Abscess of the Brain, with Double Optic Neuritis." This case will be considered in detail in the next Report on Ophthalmology in this journal. Dr. Richey briefly reports a "A Case of Eczema Simplex, with Ametropia as its Cause." Dr. Hansell reports "A Case of Bi-Temporal Hæmianopia." This is an account of a very rare clinical experience. We would have been pleased to see perimetric charts of the fields. We notice that the word hemianopia is incorrectly printed throughout the paper *hæmianopia*. Dr. Williams reports "A Case of Exophthalmus, with Spontaneous Recovery." Dr. Chisolm, "A Case of Glioma of the Right Eye." Dr. C. S. Turnbull gives a favorable account of his experience with boro-glyceride in the treatment of conjunctivitis trachomatosa. Theobald gives an interesting account of "Some Recent Theories regarding the Pathogeny of Sympathetic Ophthalmia." Knapp writes a paper on "Blindness from Retinal Thrombosis in Facial Erysipelas." This is referred to in detail in the last Report on Ophthalmology (*Medical Times*, July 26, 1884). The rest of the journal is occupied with communications on the use of jequirity, Wecken, Hasket-Derby, Chisolm, Webster,

Walker, Knapp, Gruening, and others give the results of their experience. H.

A MANUAL OF PRACTICAL HYGIENE. By EDMUND A. PARKES, M.D., F.R.S. Edited by F. S. B. F. DE CHAUMONT, M.D., F.R.S. Sixth Edition, with an Appendix. Vol. II. 8vo, 556 pages. New York, William Wood & Co.

This is the November number of Wood's Library for 1883, and is fully the equal in every particular of the first volume of the work, which was noticed in these columns some months ago. A large portion of the present volume is devoted to military hygiene. Other topics are the hygiene of habitations, removal of sewage, exercise, clothing, and climate. In a brief but practical article on disposal of the dead, preference is given to the plan of cremation, the author remarking truly that the only valid argument against it is the possible concealment of crime; but this, instead of being an objection, might be converted into an advantage by rendering careful post-mortem inquiry more common. About one hundred and twenty-five pages are devoted to what is called an "American Appendix." This includes a series of articles on special topics in sanitation. They are written by well-known American authorities, and present the latest phases of sanitary science. As worthy of particular commendation appears to us the article by Dr. E. G. Love, of New York, on account of his thorough knowledge of the subject and the non-sensational tone in which he refers to the common adulterations, pointing out, as he does, that in most cases they are frauds, but not deleterious to health.

GLEANINGS FROM EXCHANGES.

DR. J. HUGHLINGS JACKSON ON EVOLUTION AND DISSOLUTION OF THE NERVOUS SYSTEM.

—The following is an abstract of the first Croonian lecture on evolution and dissolution of the nervous system. After introductory remarks, the lecturer said, "Beginning with evolution, and dealing only with the most conspicuous aspects of it, we say of it that it is an ascending process of development in a particular order. We make three statements, which, although from three different stand-points, are about the very same thing: (1) Evolution is a passage from the most to the least organized, that is to say, from the lowest well-organized centres to the highest least organized centres; putting this otherwise, from centres comparatively well organized at birth up to those—the highest centres—which are continually organizing through life. (2) Evolution is a passage from the most simple to the most complex, again from the lowest to the highest centres. (3)

Evolution is a passage from the most automatic to the most voluntary. So that the conclusion come to is, that the highest centres, which are the climax of nervous evolution, and which make up the 'organ of mind,' or physical basis of consciousness, are the least organized, the most complex, and the most voluntary.

"So much for the positive process by which the nervous system is 'put together,'—evolution. Now for the negative process, 'the taking it to pieces,'—dissolution.

"The process of dissolution being the reverse of evolution, just spoken of, little need be said about it here. It is a process of descending undevelopment, it is a 'taking-to-pieces' in the order, from the least organized, from the most complex and most voluntary, *towards* the most organized, most simple, and most automatic. I have used the word *towards*, for if dissolution were up to and inclusive of the most organized, etc., if, in other words, dissolution were total, the result would be death. I say nothing of total dissolution in these lectures. Dissolution being partial, the condition in every case of it is duplex. Evolution not being entirely reversed, some level of evolution is left. Hence the statement 'to undergo dissolution' is rigidly the equivalent of the statement 'to be reduced to a lower level of evolution.'"

After making a broad division into uniform and local dissolutions, and speaking briefly of the difference, the lecturer adduced examples of dissolution, admitting that he had selected the most illustrative cases.

1. Starting at the bottom of the nervous system, the first example is the commonest variety of progressive muscular atrophy. We see here that atrophy begins in the most voluntary limb,—the arm; it affects first the most voluntary part of that limb,—the hand; and first of all the most voluntary part of the hand; it then spreads to the trunk, in general to the more automatic parts.

2. Going a stage higher, we come to hemiplegia, owing to destruction of part of a plexus in the mid-region of the brain. Choosing the commonest variety of hemiplegia, we see that there is a loss of more or fewer of the most voluntary movements of one side of the body; we find that the arm, the more voluntary limb, suffers the more and longer; we find, too, that the most voluntary part of the face suffers the most.

3. The next illustration is paralysis agitans, which I believe to be a morbid affection of the cortex in the mid-region of the brain (middle motor centres). But, apart from all speculation, this disease illustrates dissolution well. In most cases the tremor affects the arm first, and most often begins in the hand, and most often in the thumb and index finger.

4. Next we speak of epileptiform seizures, which are unquestionably owing to disease

in the mid-region of the brain. Taking the commonest variety, we see that the spasm mostly begins in the arm, nearly always in the hand, and most frequently in the thumb or index finger.

5. The next illustration would be by paralysees after epileptiform seizures; in these cases, so far as I have observed, the paralysis affects those parts which have previously been most convulsed. If this observation be correct, nothing further need be said, for if the epileptiform seizure illustrates dissolution, then the paralysis which follows it, as its shadow, illustrates it too.

6. Chorea is a disease in which the limbs (the most voluntary parts) are affected more than the trunk, and the arms more than the legs. In this case the localization of the disease has not been made out; symptomatically it illustrates dissolution.

7. Aphasia.—This well illustrates the doctrine of dissolution, and in several ways. We consider a case of complete speechlessness. (a) There is loss of intellectual language, with persistence of emotional language; the patient cannot speak and cannot make signs, except of a very simple kind; yet, on the other hand, he smiles, frowns, varies the tones of his voice (he may be able to sing), and gesticulates as well as ever. (b) The frequent persistence of "yes" and "no" in the case of patients who are otherwise entirely speechless, is a fact of extreme significance. We see that the patient has lost all speech with the exception of the two most automatic of all verbal utterances. He retains those two words (really prepositions), which stand on the border-ground of intellectual and emotional language. "Yes" and "no" are evidently most general, for they assent to or dissent from any statement whatever; in consequence of being frequently used they are of necessity highly organized, and as a further consequence they are highly automatic. (c) A more important, though not more significant, illustration is, that the patient who cannot get out a word in speech nevertheless understands all that we say to him. Plainly this is loss of a most voluntary service of words, with persistence of a more automatic service of words. We get illustrations from small corners. (d) As regards the utterance "no," we find three degrees of service, yet a patient may use it emotionally only,—most automatic service; another patient may also be able to reply with it,—a less automatic, but still very automatic service of it (here this is some real speech). There is a still higher use of it which some patients have not got. A patient who can reply "no" to a question may be able to say "no" when told to do so. (e) A patient who is speechless may be unable to put out his tongue when told to do so; that he knows what is wanted is sometimes shown by his putting his fingers in his mouth to help out the organ.

The organ serves well in all more automatic operations. Here is evidently a reduction to a more automatic condition: there is no movement of the tongue more voluntary than that of putting it out when told.

So far I have spoken of dissolution affecting one side of the nervous system on different levels. Coming to the highest centres, we speak of uniform dissolution, of cases in which all divisions of the centres are subject to the same evil influence. I choose some cases of insanity. In doing this I am taking up the most difficult of all nervous diseases. I grant that it is not possible to show, in detail, that they exemplify the principle of dissolution; but choosing simple cases we may show clearly that they illustrate it in general. I take a very commonplace example,—“delirium” in acute non-cerebral disease. This, scientifically regarded, is a case of insanity. In this, as in all other cases of insanity, it is imperative to take equally into account, not only the dissolution, but the lower level of evolution that remains. The patient's condition is partly negative and partly positive. Negatively he ceases to know that he is in hospital, and ceases to recognize persons about him. In other words, he is lost to his surroundings, or, in equivalent words, he is defectively conscious. We must not say that he does not know where he is *because* he is defectively conscious: his not knowing where he is is itself defect of consciousness. The negative mental state signifies, on the physical side, exhaustion, or loss of function somehow caused, of some highest nervous arrangements of his highest centres. We may conveniently say that it shows loss of function of the topmost layer of his highest centres. No one, of course, believes that the highest centres are in layers; but the supposition will simplify exposition. The other half of his condition is positive. Besides his *not* knowings, there are his *wrong* knowings. He imagines himself to be at home or at work, and acts, as far as practicable, as if he were; ceasing to recognize his nurse as a nurse, he takes her to be his wife. This, we may say, shows activity of the second layer of his highest nerve-centres, but which, now that the normal topmost is out of function, is the *then* highest layer; his delirium is the “survival of the fittest states” on his *then* highest evolutionary level. Plainly he is reduced to a more automatic (or, we may say, more familiar) condition. Being negatively lost to his present “real” surroundings, positively he talks and acts as if adjusted to some former “ideal” surroundings.

It is not to be understood that each is a different dissolution. All that is meant is, that each shows a reduction from the voluntary towards the automatic, in what the centre diseased represents. If we take extreme cases, the case of progressive muscular atrophy and the case of insanity (delirium

in acute non-cerebral disease), we say that the two are alike, because in each there is reduction to a more automatic condition, and we say, too, that they are unlike, since the parts of the nervous system morbidly affected are exceedingly different.

I have so far almost ignored the distinction between nervous states and mental states. Now, if the case of insanity be considered as a series of mental phenomena only, it would be absurd to compare or even to contrast it with progressive muscular atrophy, which is a series of physical phenomena only; but no difficulty can arise if it be understood that insanity or "disease of the mind" is, with medical men, disease of the highest nervous centres, revealing itself in a series of mental phenomena. We compare and contrast disease of the highest centres with disease of certain anterior horns (some lowest centres), revealing itself in atrophy of muscles. But, acknowledging this, it may be said that the two things are so exceedingly different that it is frivolous to compare or even to contrast them. Yet no one denies that each is a morbid affection of the central nervous system. This being granted, the rejoinder to those who insist on their extreme unlikeness is that the lesion in one is at the very bottom, in the other at the very top of the central nervous system; two lesions cannot possibly be farther apart in the central nervous system.

I next speak of different depths of dissolution. The deeper the dissolution, the shallower the level of evolution remaining. I take in illustration some of the eight cases. Of hemiplegia, owing to lesion of the internal capsule, there are three degrees or depths (of course the division into three degrees is arbitrary). In the first degree there is some paralysis of the face, arm, and leg; in the second degree there is more paralysis of these parts, and in addition there is a greater range of paralysis: the patient's head and eyes are turned from the side paralyzed. Here is illustrated what I call "compound order." The difference between the two degrees is not that in the second there is more paralysis only, nor that there is a greater range of paralysis only, but in both respects; there is more paralysis of the parts affected in the first degree, and extension of range of paralysis to parts beyond them. An adequate doctrine of localization has to account for such increase of paralysis in compound order. Then in the third degree of, or rather beyond, hemiplegia there is universal immobility. In this condition the patient has lost consciousness, and this loss may be said to explain why he does not move the "other" or "second" side of his body; but this explanation is obviously verbal. I admit other difficulties.

I now speak of degrees of epileptiform seizures, as illustrating depths of dissolution. There are degrees of these, from spasm of the

thumb and index finger to universal convulsion. That these degrees are compound is very evident. The first stage of the fit is, to speak roughly, that the arm is a little affected; the second stage is that the arm is more affected, and the face a little; the third stage is that the arm is most affected, the face much, and the leg a little.

Degrees of dissolution were illustrated by taking a larger range of cases of aphasia from slight defect of speech to entire loss of it. It was insisted on that in each case the symptomatic condition was double,—that there was a negative and a positive element. To recognize this was particularly important in cases sometimes called "defect of speech;" the patient's not saying what we call the right words was alone owing to the disease,—the dissolution; his saying the wrong words was owing to activity of healthy nervous arrangements,—to activity on the lower level of evolution remaining.—*Medical Times and Gazette*.

TRIPLE PRIMARY MAJOR AMPUTATIONS IN A BOY FOUR YEARS OF AGE—RECOVERY.—Dr. J. B. Armstrong, of Chicago, Illinois, reports the case of a boy 4 years of age, receiving railroad injuries necessitating immediate amputation of, first, the right leg at the tuberosity of the tibia; second, the left thigh through its upper third; and, third, the left forearm, just below the elbow-joint. There were also extensive contused lacerations of the scalp. The case did nicely until the sixth day, when the thyroid gland became enlarged to such an extent as to interfere with deglutition. Aside from this latter rare complication, the child made a quick and perfect recovery. "He has a peculiar mode of getting about. Reaching out with the hand, he jumps off the hip to the distance measured, similar to the gait of a rabbit, and by a rapid repetition of this act manages to locomote with comfort and satisfaction."—*Archives of Pediatrics*, June 15, 1884.

FATAL CASE OF CHLOROFORM NARCOSIS.—Dr. Luther Sexton reports a case of a woman, 35 years of age, of intemperate habits, who was admitted to the Charity Hospital, New Orleans, for operation for necrosis of the tibia, supposed to be syphilitic. A similar operation under chloroform had been performed four months before without bad symptoms. Upon this occasion chloroform was administered by the same person and in the same way, using a cone into which about half a drachm of chloroform was poured. The cone was held at some distance from the mouth at first, but afterwards was closely applied. The first symptom noticed was that the pulse become more rapid and less strong. The muscles afterwards became rigid, and the respiration suddenly failed. All the usual methods—nitrite of amyl, ammonia, reversing the body, artificial respiration—were em-

ployed, but the patient could not be resuscitated. At the post-mortem there were old pleuritic adhesions in the chest, kidneys contracted, and urine contained albumen; bowels injected, heart dilated and distended with dark fluid blood and clots; a large fibrinous clot extended into the pulmonary artery; brain-substance was anæmic. Death appeared to have been caused by spasm of the diaphragm and respiratory muscles. The chloroform itself was tested and found to be pure.—*New Orleans Med. and Surg. Journal*, May, 1884.

RESORCIN FOR THE RELIEF OF PAIN.—Andeer finds that although resorcin has no benumbing effect upon the normal human skin, yet it has very decided analgesic properties in painful affections of the skin or mucous membranes. He also gives it internally in colic, cardialgia, and painful affections of the larynx, in increasing doses of one to ten gm. and also in the form of clysters (thirty-per-cent. solution), with satisfactory result.

MISCELLANY.

A BILL was recently introduced in the United States Senate providing for a reward of one hundred thousand dollars to any person of any nationality who shall discover the true cause or germ of yellow fever, with any certain means of effecting its prevention, destruction, or material modification, or who, without discovering the cause or germ of said disease, shall discover a certain and practical mode of effecting its prevention, destruction, or material modification.

PROF. ROBERT E. ROGERS has resigned the professorship of Chemistry in the Jefferson Medical College, on account of feeble health. His successor will probably be elected next month.

DR. GEORGE C. HARLAN has removed his office to No. 1515 Walnut Street, Philadelphia.

NOTES AND QUERIES.

EDITOR MEDICAL TIMES:

DEAR SIR,—In an article on some reckless experiments with *coccus indicus*, in your issue of July 12, the author, Dr. Haynes, refers to the fatal case of poisoning from the agent reported by me in the *Medical News*, November 3, 1883, and remarks, "He states that no other fatal case is on record; but one can be found in Mitchell (*Therapeutics*, p. 312, 1850) which is almost the counterpart of Sozinsky's case."

Dr. Haynes has made a mistake. The case of Dr. Thomas D. Mitchell was not fatal; it was not even one of decided poisoning, for in spite of treatment with tobacco, pushed to the point of causing vomiting and purging, as the doctor thought, the woman got well.

Mine was a hopeless case. I used morphia hypodermically—the only remedy at hand. Chloral would possibly

have been a better one, but from the vomiting and purging it could not have been given by the stomach to any purpose.

Dr. Haynes's mistake was doubtless made unintentionally; but, for truth's sake and in justice to me, I would ask you to be kind enough to publish this correction.

Yours respectfully,

THOMAS S. SOZINSKEY, M.D.

2210 FAIRMOUNT AVENUE, PHILA., July 22, 1884.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 20, 1884, TO AUGUST 2, 1884.

HEAD, JOHN F., COLONEL AND SURGEON.—Ordered to Portsmouth, New Hampshire, to meet the Greely party, and consult upon the proper course of treatment with a view to the entire restoration to health of Lieutenant Greely and the men of his command. S. O. 177, Paragraph 14, A. G. O., July 30, 1884.

WRIGHT, J. P., MAJOR AND SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. Paragraph 3, S. O. 89, Headquarters Department of Texas, July 17, 1884.

WRIGHT, JOSEPH P., MAJOR AND SURGEON.—Sick leave of absence extended three months on surgeon's certificate of disability. By Paragraph 12, S. O. 176, A. G. O., July 29, 1884.

WOODWARD, JOSEPH J., MAJOR AND SURGEON.—Sick leave of absence extended six months. Paragraph 9, S. O. 178, A. G. O., July 31, 1884.

HARTSUFF, ALBERT, MAJOR AND SURGEON.—Leave of absence extended one month. S. O. 79, Headquarters Division of the Missouri, July 18, 1884.

McELDERRY, HENRY, CAPTAIN AND ASSISTANT-SURGEON.—So much of Paragraph 12, S. O. 165, A. G. O., July 16, 1884, as assigned him to duty in Department of the East is revoked, and he is ordered to report in person to the Surgeon-General of the army for duty in connection with World's Industrial and Cotton Centennial Exposition at New Orleans, Louisiana. Paragraph 12, S. O. 173, A. G. O., July 25, 1884.

FINLEY, J. A., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension, to take effect about September 1, 1884. Paragraph 2, S. O. 91, Headquarters Department of Texas, July 22, 1884.

REED, WALTER, CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Sidney, Nebraska, and ordered for duty as post surgeon, Fort Robinson, Nebraska, relieving Assistant-Surgeon Henry McElderry, U.S.A. Paragraph 2, S. O. 62, Headquarters Department of the Platte, July 22, 1884.

BENHAM, R. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Brown, Texas. Paragraph 1, S. O. 90, Headquarters Department of Texas, July 19, 1884.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months, to take effect when relieved from duty in Department of the Platte. Paragraph 2, S. O. 68, Headquarters Division of the Missouri, June 27, 1884.

TAYLOR, A. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Riley, Kansas. Paragraph 1, S. O. 153, Headquarters Department of the Missouri, July 29, 1884.

GANDY, C. M., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to commence between August 15 and 30, provided he furnish medical attendance at Fort Brady, Michigan, during his absence. Paragraph 5, S. O. 154, Headquarters Department of the East, July 30, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM JULY 20, 1884, TO AUGUST 2, 1884.

P. A. Surgeon G. E. H. HARMON, ordered to temporary duty at Norfolk Navy-Yard.

PHILADELPHIA, AUGUST 23, 1884.

ORIGINAL LECTURES.

REMARKS ON HYPERIDROSIS AND BROMIDROSIS.

BY GEORGE HENRY FOX, M.D.,

Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York.

(Reported for the *Philadelphia Medical Times*.)

HYPERIDROSIS is an affection in which there is an abnormal functional activity of the sweat-glands. The profuse perspiration which follows vigorous exercise or exposure to a high temperature is purely physiological in character and consistent with health. The colliquative sweating of phthisis, and also that which is observed in rheumatism, intermittent fever, and other febrile affections, although, strictly speaking, an instance of hyperidrosis, is usually not so considered when viewing the condition from a dermatological stand-point. Many who are otherwise in apparently perfect health sweat excessively without apparent provocation, and are annoyed thereby to a greater or less degree. Corpulent people, especially in summer-time, are especially prone to a mild degree of hyperidrosis, but some who are not particularly well nourished suffer in like manner and at various seasons of the year. The affection may occur in an acute form and subside in a short time, the obscure cause having ceased to act; but generally it is extremely chronic, as the disposition to the excessive secretion of sweat is not easily subdued.

Hyperidrosis may be general (*H. universalis*), or local in its manifestation (*H. localis*).

Occurring over the whole surface of the body, it is not usually severe, but when limited to certain parts it is much more noticeable, and constitutes a not uncommon and an extremely disagreeable affection. The palms, soles, and axillæ are the parts which are most apt to be the seat of the trouble, but the face and the genital region are not infrequently affected.

In rare cases, hyperidrosis occurs in a unilateral form. One side of the head, or one of the extremities, or even one-half of the entire body, may be bathed in perspiration, while the opposite side retains its

natural condition. A story is told of a celebrated young comedian who was subject to unilateral hyperidrosis of the face. One night he appeared upon the stage as an old man, the face being made up to suit the part. As the play proceeded, the merriment of the audience became excessive, and the unusual and seemingly uncalled-for shouts of laughter which greeted his acting surprised and perplexed him. On retiring behind the scenes, he found that the unilateral perspiration had washed the paint from one side of his face, which had presented to the audience the appearance of wrinkled age upon one half and blooming youth upon the other.

Hyperidrosis of the hands is not only annoying to the patient himself, but to those whom the social custom requires him to greet with a shake of the hand. A kid glove cannot be worn in certain cases without becoming immediately soaked through by the increased secretion, and often the affection prevents the sufferer from following any occupation involving the handling of fine textures. Frequent wiping of the hands does little good, and in social intercourse the consciousness that the hands are unpresentable and the consequent anxiety of mind tend only to intensify the unfortunate condition.

Hyperidrosis of the feet is often associated with a similar condition of the hands, but either may exist alone. When the feet are the seat of the affection, the stockings, however frequently changed, are kept moistened by the secretion, and even the leather covering of the feet becomes soaked in time. A disagreeable odor is usually occasioned by the chemical change which the secretion undergoes.

Treatment.—The predisposing causes of hyperidrosis should be diligently sought for in every case, and removed if possible. Nervous derangement and an impaired circulation are frequently underlying conditions which demand the most careful hygienic treatment. Among the drugs which have been recommended as capable of producing beneficial results in this affection are atropia and ergot. Small doses of jaborandi have also been employed with good effect in both local and general hyperidrosis. As it is impossible in many cases to determine the precise cause of the disorder, we are generally forced to depend largely upon external applications,

many of which give immediate relief and in time subdue the excessive secretion. When the sweating is general, baths containing sea-salt or carbolic acid may be employed, or portions of the body rubbed successively with a soft sponge dipped in the following lotion :

Sulphate of quinine, 5 parts ;

Alcohol to 500 parts.—M.

In hyperidrosis of the axilla or genital region, the skin may be bathed with a strong solution of tannin or alum, and, after careful drying, the following powder dusted over the surface :

Salicylic acid, 3 parts ;

Starch, 10 “

Talc powder to 100 “ —M.

For the hands and feet a similar plan of treatment is useful. Another excellent remedy is the subnitrate of bismuth, rubbed well into the skin after bathing, or dusted over the inside of the gloves or stockings. Hebra advised a plan of treatment which, if properly carried out, usually affords immunity from the annoying secretion for a considerable time, if it does not effect a cure. This plan consists in spreading diachylon ointment upon pieces of linen, with which the fingers and toes, as well as the rest of the hands and feet, are carefully enveloped. This dressing is to be reapplied twice daily for a week or two, the hands not being washed in the mean time. The application causes an exfoliation of the epidermis, leaving the skin soft and comparatively dry.

BROMIDROSIS is an affection in which the perspiration is characterized by a peculiar, and usually an extremely disagreeable, odor. The normal perspiration has always a slight odor, from admixture with the sebaceous secretion, although this may not be perceptible to the average sense of smell, except in summer, or after violent exercise. In disease, the perspiration is frequently changed in character, and rheumatism, intermittent fever, scurvy, and other affections have been supposed by some to have each its distinct and characteristic odor. Indeed, some have claimed that the odor emanating from various skin diseases, notably smallpox, scabies, and syphilis, might be utilized as a basis of diagnosis. Certain persons whose skin is perfectly free from disease and whose general condition is good exhale from their bodies a peculiar odor which seems to be natural to them. It may be constant, or occur only

in connection with mental excitement or other unusual conditions. The odor is usually indescribable, although it has been likened in certain instances to “violets,” “pineapple,” etc.

In bromidrosis the secretion may exist in normal amount, or it may be in excess. The latter is commonly the case upon the feet and in the axilla, in which case we have simply hyperidrosis with a fetid odor. This odor may not be due to any change in the composition of the perspiratory secretion, but usually results largely from the decomposition of the sweat which has soaked into the clothing of the part. In bromidrosis of the feet even the shoes may become saturated with the foul secretion.

The peculiar odor may also be due, in great part, to a peculiar secretion of the sebaceous glands, which becomes mingled with the perspiration. As the fetid secretion of bromidrosis is more irritating to the skin than a simple excess of perspiration, we find in this disease a marked tendency for the skin, especially of the feet, to become macerated and tender. Upon the soles the epidermis is always sodden, and often peels off in large masses, leaving an inflamed and often eczematous condition, through which locomotion is seriously impaired.

Treatment.—The general treatment of bromidrosis is substantially the same as that of hyperidrosis, since whatever lessens the amount of the secretion tends to diminish the unpleasant odor. The natural tendency of some persons to secrete fatty acids, which give to the mingled sweat and sebum a pungent, if not a disagreeable, odor, is extremely difficult to overcome. The more severe forms of fetid sweating are, fortunately, more amenable to treatment, and are often checked by the adoption of such measures as promote the general health of the person affected. In the mean time, a resort must be had to local and more or less palliative measures. Lotions and dusting-powders of an antiseptic character have been found most useful in bromidrosis, especially when the disease involves the feet, as it is most apt to do.

For bathing the skin a one-per-cent. solution (five grains to the ounce) of chloral or permanganate of potash is both cleanly and beneficial. It should be applied with as little friction as possible and allowed to dry upon the skin, or the excess of

moisture may be removed by the pressure of a soft warm cloth. Ainsworth recommends the application of the following powder:

Dried alum, 45 parts;
Salicylic acid, 5 parts.—M.

Thin, of London, after a careful study of the subject of bromidrosis, found the moisture which collects in a patient's stocking to be of an alkaline reaction and swarming with bacteria. This fluid acts as an irritant to the skin and greatly aggravates the disease. As a parasiticide application, and one calculated to allay the irritation of the skin, he recommends the use of boric acid. The stockings should be changed twice daily, and the stocking-feet placed for some hours in a jar containing a saturated solution of boric acid. They are then dried, and may be worn again,—the odor having disappeared.

To prevent the fetid perspiration soaking into the soles of the shoes, and thus giving rise to a permanent stench, cork soles are to be worn during the day, and soaked overnight, like the stocking-feet, in the jar of boric acid.

ORIGINAL COMMUNICATIONS.

AN INSTRUCTIVE CASE OF SYPHILIS.

BY HUGO ENGEL, M.D.

THE following more than usually interesting case of syphilis, proving the possibility of a radical cure of the disease even after the outbreak of dangerous symptoms denoting syphilitic affection of the brain, has been under my observation for the last eight years. As the case demonstrates beyond a doubt that this malady can be cured, and that this can be so thoroughly effected as to render the individual liable to a second infection, and as the case with regard to the similarity of certain symptoms during the first and second attack of secondary syphilis, and with regard to the total disappearance of grave phenomena, probably is a unique one, for fear that its history might be looked upon with suspicion by more than one, I sent the patient to my friend Dr. J. M. Barton for examination. This physician, who, during a period of twelve years as assistant to our venerated Professor S. D. Gross

and as chief of his clinic, and as visiting surgeon to two of our largest hospitals, has enjoyed a large experience, fully coincided in my view of the case. Then Dr. J. F. Edwards, the assistant editor of the *Medical and Surgical Reporter*, had the opportunity of watching the progress of the case during the whole time the patient was under my attendance, so that, no matter how incredible some parts of the following history may seem, their actual occurrence cannot be disputed. One may err, but it can scarcely be assumed that three will do so, and the less if one of them, undoubtedly a competent authority, saw the patient but for the purpose of critical examination. After this introduction, which the importance of the case necessitates, I will now give its clinical history.

April 1, 1876, I was sent for in a hurry to come at once to a wholesale notion-store in the lower part of our city, where a salesman was said to have been seized by apoplexy. On my arrival I found J. F. C., æt. 24, in an unconscious condition. While talking with the book-keeper of the store, he had suddenly fallen down. They had observed convulsive motions extending over the whole body, but mainly noticeable on the left side. I saw him about twenty minutes later. His face looked pale; there was slightly stertorous breathing; the right pupil did not at all react to light, the left very sluggishly. The left arm and leg were the seat of convulsive twitchings. The pulse was slow and irregular, the temperature in the axilla $97\frac{3}{8}^{\circ}$ F.

There was no sign indicating the presence of morbus Brightii; the heart apparently was perfectly sound. These facts and the youth of the patient spoke against apoplexy. From the brother of the patient I heard that J. F. C. had never suffered from epileptic fits, and that to his knowledge he also had not met with any serious accident, as a fall or a blow on the head. This history, the youth of the patient, and the absence of any plausible cause at once caused me to think of syphilis. I now also detected the peculiar yellowish-dirty color of the skin over the brows, and, on further examination, I discovered an eczematous eruption extending over the whole anterior surface of the trunk and indicating by its copper-color its luetic origin. My diagnosis, therefore, was syphilitic affection of the brain.

I prescribed for the patient, and told his

brother that he would soon come to, and that he should at once send for the physician who had attended him the last time, by which I meant, when he had the chancre. In the afternoon I received notice to come to the patient's house. I found him in bed, but comparatively well. It was there that he gave me the following history of himself.

About eight months before, he had noticed a sore—only one—on his penis. He at once went to a homœopath, who attended him for six weeks, when he discharged him as cured, though he had a small bubo remaining. A few months later he was attacked by sore throat and by the eruption described. He returned to the same doctor, who gave it as his opinion that the symptoms had nothing to do with the chancre, but were caused simply by impurity of the blood. The sore throat soon disappeared, but the eruption lingered and evinced no sign of improvement, being still present when I saw him. About three weeks before the epileptiform attack he began to suffer from headache; which usually made its appearance soon after the noon-day meal and increased in severity towards night. A day or two before the seizure he felt giddy; about an hour before the attack he was seized with giddiness, which was so severe that he thought he would faint.

I at once put the patient on the treatment later to be described. For about two years he was almost continually taking medicine, and then I advised him every spring and autumn to adopt certain precautionary measures, of which, also, I shall later speak. Only about three months after the beginning of my treatment did he again suffer from any secondary symptoms, the headache and vertigo returning for about two weeks, and then disappearing, without a renewal of the epileptiform seizure.

For five years he resumed twice a year this after-treatment. He then seemed to have totally recovered. During all those years he was perfectly free from all symptoms of the disease. It is usually observed in patients who have suffered fromlueticepileptiform seizures, that local paralyses ensue: especially one optic nerve is apt to atrophy. Nothing of the kind took place in J. F. C. A careful ophthalmoscopic examination failed to reveal the least sign of a morbid lesion. The patient altogether gained over twenty pounds. His com-

plexion was unusually clear. There was not a spot on his skin, not an ache in his body.

This undisturbed health was enjoyed by him until last year. Returning from a trip out West in the spring of 1883, he had sexual intercourse with a woman in New York, and one week later he came to me with a Hunterian chancre. It took about three weeks to heal. Nothing further appeared until three months later, when he was seized by the same eczematous eruption on the anterior side of his trunk that he had suffered from the first time seven years before. At the same time graver symptoms began to show themselves. He suffered from intense pain near the junction of the third rib with the sternum on the right side; complained of violent palpitation of the heart, of difficulty of breathing, and of a feeling of great anxiety and restlessness, and rapidly lost flesh. In this condition he sent for me. I was astonished when I saw him. He had had several rigors; his temperature was $105\frac{1}{2}^{\circ}$ F., and his face had a cadaverous look, and wore that anxious expression which we at times notice in endocarditis. He suffered from excruciating pains, beginning at the place mentioned near the sternum, and extending in nearly a straight line all the way down to below the umbilicus; and along the whole course of the pain violent palpitation could be felt and at some places seen. The heart itself was greatly agitated, and over the seat of the aortic semilunar valve a harsh blowing murmur was heard, which could also be perceived at the back, and anteriorly between the ensiform cartilage and the umbilicus. The heart-sounds over the mitral and tricuspid valves were normal; the pulmonary could not be clearly discerned, on account of the loudness of the murmur in its neighborhood. The pulse was rapid and slightly irregular. The patient could scarcely breathe for pain, and seemed in a moribund condition. Immediately over the arch the area of dulness was decidedly increased.

I had first taken the case for one of syphilitic periostitis attacking the ribs and the sternum; but the characteristic symptoms—the disturbance of circulation, the murmur, the feeling of great anxiety—left no doubt of its being an endothelial inflammation; and the seat of the murmur, the increased dulness, indicated its being an end-aortitis, especially severe at the

arch, but, to judge from the extension of the pain, of the murmur, and of the palpitation to the abdominal region, attacking nearly the whole aorta.

It was the first time that I had seen a case of this nature. The symptoms were urgent; life seemed to be threatened. I at once put the patient on the inunction treatment, advising him to rub into his skin, always at different parts of the body, a drachm and a half of mercurial ointment twice daily. When I first saw him he had been suffering from the symptoms mentioned for eleven days, and his condition had daily become worse. He assured me that during the last five days he had noticed every hour an aggravation of the symptoms, and that he had not been able to close his eyes for five minutes during the same period. Within four hours after the first inunction a decided improvement set in, and on the third day his symptoms had so decidedly ameliorated that I advised the patient to use daily but one inunction of a drachm each. Though the pain had almost totally stopped by the sixth day, the fever disappeared, the palpitation nearly all ceased, and the murmur almost vanished, I applied a large fly-blister over the chest, still more to stimulate absorption. By the tenth day the patient had to all appearances recovered. A slight pain under the upper third of the sternum and a somewhat overacting heart were the only symptoms left, and even these disappeared during the following three weeks.

More stubborn has been the eczematous eruption, which has to-day not yet totally disappeared, though a slow improvement may be noticed every few days.

This is the history of the case. Most physicians adhere to the dogma that a syphilitic person cannot contract syphilis, just as a scrofulous individual cannot be again attacked by scrofula, and a patient suffering from smallpox cannot be again infected with variola while sick with it. If such is the law,—and the rule seems to find universal application,—we must consider J. F. C. to have been perfectly free from the luetic taint when he became infected the second time. Cases where a person had been totally cured from syphilis are by no means rare; but such, where a person had become affected the second time, are very rare; and still rarer those where the patient, so thoroughly infected

as to suffer from brain-syphilis, had been so completely cured as to become the second time infected, and not only with the primary sore, but also with secondary symptoms. I have not been able to discover in literature any case of the kind.

Some may say that the syphilis in this case was from the beginning not cured, and that the second eruption simply was a continuation, as it were, of the first. That could not have been. When C. became infected the second time, he doubtless had a typical hard chancre. Its edges were thrown up, and a round induration formed its base, and continued like a tubercle of the skin after the healing of the sore. Such a condition is never observed in those herpetic eruptions from which so many luetic persons suffer. The second infection, therefore, cannot be denied. Then the time which intervened between the cessation of the first series of secondary symptoms and the appearance of the second series, and during which the patient was absolutely free from any eruption or symptom whatever, was too long—five years—to permit the supposition that the second eczematous eruption was a continuation of the first. Syphilitic patients almost never get the same skin disease twice: one form is usually followed by another; and when once lues has attacked the internal organs, the period for skin affections is over, and, with the exception of the graver forms, as rupial ulcers, breaking down gummata, etc., the skin is primarily no longer the seat of the lesion. When a patient has once reached the third period, tertiary syphilis, or that part of the second period which may still be considered as secondary lues on account of its early manifestations, as syphilis of the brain or spinal cord, there is never observed a going-back, a return to the period of milder skin affections: they have ceased forever. This well-established fact also proves, therefore, that the second eczema in C.'s case was a symptom of the second constitutional affection.

A chancre frequently heals of its own account, and no general affection ensues. But even cases of constitutional syphilis cease by themselves, and the affected individual never sees a symptom of it. I contend, however, that there has never yet been an authenticated case on record where a person that had been once attacked by a syphilitic epileptiform seizure

has *not* died of the disease, except in those where medical interference cured the lues and saved his life. I go even further, and say that an individual that has once suffered from a syphilitic epileptoid attack will soon experience others; that the attacks become more and more frequent, until the patient in one of them breathes his last, unless the further progress of the disease is stayed by medical skill.

J. F. C. had one attack, after which he was immediately placed under treatment, and with so good a result as not only to prevent the seizures from reappearing, but also to eradicate the disease so thoroughly that after an interval of five years, during which period the patient was absolutely free from any disturbance of his health, he again contracted syphilis, as if he had never before suffered from it. The condition of his blood had become so normal that the first attack did not exert even the influence of making the second milder, a fact usually observed in all zymotic diseases.

It was my intention not only to prove the perfect curability of secondary syphilis, even in its graver forms, but also to show that we have it in our power to cure almost every case of constitutional lues, if no organic lesion has produced a destruction of tissue. But before I speak of the treatment I will mention in a few words the main facts of another case.

R. S. was cured of grave constitutional syphilis, 1861, in the Charité Hospital at Berlin. A few years later I met him in Philadelphia, where he asked me if he could marry with safety. He had been subjected to the same treatment that I have adopted with all my luetic patients, and had been free from all symptoms for four years. I advised him to marry, and he did so. A year later a healthy daughter was born to him. I attended her later for the diseases of childhood. She grew up a blooming girl, and married two years ago. In May of this year I delivered her of a son, a healthy child. Though the father had suffered from a severe form of secondary syphilis, he was so cured of it that in the third generation no sign evinced an hereditary taint.

Most physicians admit that mercurial preparations are the main remedy in primary (indurated sore) and secondary lues, iodide of potash in tertiary. But the profession is divided into two classes, one treating a syphilitic patient only while he

is suffering from syphilitic symptoms, and administering the drug only until such symptoms have disappeared; and the other class putting the patient on gradually-increasing doses of mercury, and continuing the treatment even after the disappearance of the specific symptoms, until the signs of mercurial poisoning have fully developed themselves, when the mercury is followed by a course of iodide of potash.

I contend that the latter treatment is not only the best and most reliable, but also that it alone gives us a guarantee of a perfect cure. Under it, it is rare to see a patient frequently suffer from luetic symptoms; once passed through the course, he will be very, very seldom observed ever again to suffer from syphilis.

If an individual has become infected with the poison of typhoid fever, smallpox, or any other zymotic disease, nature makes a violent effort to get the poison out of the system again. It is my opinion that we will never be able to cure a patient of syphilis until he passes through a crisis. Such has been my experience, such is my conviction. I honestly speak the truth when I say that I have attended a considerable number of persons suffering from lues, but of those patients who minutely followed my directions I have never known one to return to me still suffering from syphilitic symptoms; every one of them has, to all appearances, been radically cured of the malady. To my regret, I can cite but the two cases reported in this paper as definite proofs; all the others simply never again had any manifestations of the disease. A number of them married, three of them have healthy children, but I am not yet old enough to follow up their cases to the third generation. That but one of them again contracted a primary sore is probably due to the fact that "a burned child dreads the fire." But, I repeat, it is the honest truth that I have seen in none of the cases, discharged by me as cured, the return of a single luetic symptom.

I shall now describe, in as few words as possible, my treatment, which, with the exception of a few minor alterations, is the one adopted by the best-known physicians in Germany. It is not as easy and comfortable for the patient as the other, but it gives a better result.

When a patient comes to me suffering from syphilis, I explain to him the necessity of being under continuous medical treat-

ment for the period of eighteen months, and of being under medical observation for the same length of time. I then either prescribe calomel or a still milder preparation of mercury, or—during the warm season of the year, or if I can keep the patient confined to his room—put him on the inunction-treatment. But when mercury is administered internally the dose has to be slowly increased, and to be guarded by a small quantity of opium to prevent its action on the bowels. I usually prescribe three grains of calomel with two grains of the extract of opium, and have nine pills made of the whole, the patient taking one pill three times daily. Every third day one grain of calomel is added to the prescription; or I prescribe one hundred pills, each containing one-third of a grain of calomel and the twenty-fourth of a grain of the extract of opium. In this case the patient begins with one pill a day, and increases the daily dose by half a pill. When he has reached ten pills as the daily dose, he takes half the number in the forenoon, the other half in the afternoon. In the inunction-treatment one drachm of mercurial ointment is daily rubbed into the skin, first of the right, then of the left calf; then of the right, then the left thigh; afterwards of the right, then the left arm. The underclothing is not changed. On every seventh day the patient takes a warm bath and uses plenty of soap. He also then changes his underclothing, and begins the same course over again.

The main point is to continue either treatment until salivation sets in. Even then it must not be stopped, but persevered in until decided ulceration indicates the physiological limit. A gargle of chloride of potassium, and lightly brushing the ulcerated parts and the gums with pure nitric acid every third day, and, for a few days, every day a moderate dose of Glauber's salt, will soon remove every trace of stomatitis. The patient during this period usually loses in weight: according to the amount of adipose tissue present, this loss varies from eight to twenty-two pounds. As soon as the salivation has been totally cured, two fluidrachms of ferrated elixir of cinchona are administered three times daily for one week. The patient—no matter what his symptoms previously were—by this time is totally free from any luetic manifestation; his appetite rapidly returns, he quickly increases in weight,

and commences to feel better than he did at any time since suffering from syphilis.

After the elixir has been taken a week, iodide of potassium is administered in increasing doses. Usually beginning with five grains, I slowly augment the quantity until the patient is taking twenty grains three times daily. Only, when some syphilitic symptom returns, this dose is still more increased, until the symptom ceases. Whatever dose is necessary (or the twenty-grain dose) is continued for one week, when the quantity is slowly diminished in the same way as it was increased.

The patient is then advised to go for a week or two to the sea-shore or to the country. If he cannot afford such a luxury, out-door exercise in the Park is recommended. On his return, he takes for a period of four weeks, every second day, a hot bath, and internally a decoction somewhat similar to decoctum Zittmannii. It is remarkable that, if there still be any syphilis in the system, it now is apt to show itself. If such is the case, the whole course of treatment is repeated, and again continued so long. Should no syphilis manifest itself, the patient is put for the remainder of the eighteen months on the following treatment: for four weeks he takes one-fourth of a grain of yellow iodide of mercury; then for four weeks one-sixteenth of a grain of corrosive sublimate; then for four weeks the same dose of binoxide of mercury; then for four weeks iodide of potash, as before; then the same course repeated, until seventeen months are passed, when during the last month two fluidrachms of ferrated elixir of cinchona are ordered.

During all this time the utmost attention is paid to the patient's diet and hygienic surroundings. He has to lead a perfectly regular life, and, while everything injurious is interdicted, all that may improve the general health is recommended. Certainly, in each individual special conditions arise, which are treated on general principles. During the second period of eighteen months, the patient passes every three months through a three weeks' course of iodide of potassium. Every four days during such a course the dose is altered, beginning with five, increasing to ten, then to twenty grains three times daily, and then diminishing to ten, and lastly to five grains. When the patient is finally discharged, he is recommended, during the

remainder of his life, every April and October, beginning on the first of the month, to take that same short course of iodide of potassium that he passed through six times during the year and a half he was under medical observation. For this purpose he is advised to buy one ounce and two drachms of iodide of potash and fifteen ounces of syrup of orange-peel, one teaspoonful of this mixture representing five grains of the drug; so that he takes the first four days one teaspoonful, then two, then four, then two, and then again one, three times daily, in plenty of water, two hours after meals.

No matter what the explanation, the results are such as to increase my confidence in the treatment. Other procedures will remove syphilitic symptoms; but the patient will return every three, six, or nine months with some new complaint, or, when older, he will suffer from tertiary symptoms. Under the treatment proposed, he is forever relieved from all symptoms,—with the chance of once more contracting the disease, it is true; but that is his own lookout.

507 FRANKLIN STREET, PHILADELPHIA.

EVIDENCES THAT CERTAIN HISTOLOGICAL ELEMENTS ACT AS PROPHYLACTIC AGENTS.

*Read before the Medical Association of Central New York,
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BY C. S. DOLLEY, M.D.

THE analogy between certain tissue-elements of higher animals and independent unicellular organisms has come to be universally recognized, the amœboid cells of the more complex animal body being known to carry on the same series of phenomena, as regards movement, growth, and reproduction, as the simple rhizopod.

The exact significance of amœboid cells is, however, still a matter of discussion, and yet it cannot be doubted that they possess some specific function.* The examination of living cells from various tissues usually demonstrates the presence of small particles embedded in their substance, all of which—pigment, fat-molecules, granules, etc.—cannot be considered as physiological products of the cells themselves.

Haeckel* found, whilst injecting *Tethys fimbriata* with indigo, that fine particles of coloring-matter could penetrate into the interior of the blood-corpuscles. Engelmann† pointed out the movement of the corneal corpuscles; Von Recklinghausen‡ was the first to furnish proof that pus-corpuscles or other cells in complex animal bodies can migrate in the tissues even of a dead cornea; while Cohnheim§ demonstrated the power of certain living cells to transplant themselves from one organ to another and from one tissue to another.

Joung,|| Pagenstecher,¶ Biesiadecki,** and others favor the idea that colorless blood-corpuscles are destined for the regeneration of the various tissues of the body. While this may be true to some extent, many observed facts point rather to the conclusion that they exercise during their free stage the very important office of depuratory or prophylactic agents, removing from the blood and tissues materials for which there is no further use or which are foreign or injurious to the organism.

It was long held that the red corpuscles of the blood resulted directly from a metamorphosis of the leucocytes; but, since the demonstration by Norris and others of a third corpuscle,†† the leucocytes have been left comparatively functionless.

It is considered that the cellular elements of the different tissues of the animal body are nourished by a pabulum brought to them in a state of solution,—a serous or tissue fluid. That this is the case is unquestionable; but that certain cells which have not secreted a firm cell-wall nor become fixed, retain the power of taking up and digesting particles not in solution, is nearly as well established.

In studying those forms which occupy an intermediate position between the protozoans, or single-celled, and the metazoans, or many-celled, animals (*i.e.*, the colonial monads), we find that, while the colony exercises some powers as a whole, the various members composing it retain

* Stricker's Manual of Histology, p. 34.

† Ueber die Hornhaut, Leipsic, 1867.

‡ Virchow's Archiv, Bd. xxviii.

§ Ibid., Bd. xi.

|| Stricker's Manual of Histology, p. 47.

¶ Wiener Sitzungsberichte, 1868.

** Stricker's Manual, p. 47.

†† R. Norris, M.D., Physiology and Pathology of the Blood, London, 1882.

Bizzozero, On a New Element of Mammalian Blood, and the Part it plays in Thrombi and Coagulation generally. Centralblatt, January, 1882.

all their functions as individuals: there is no division of labor; each cell carries on a life of its own. This has led to the question whether the cells of metazoans proper may not retain this power to a degree. Thus, the ectoderm cells of certain hydroid polyps protrude pseudopodia which anastomose to form a sort of plasmodium, and have been seen in *Plumularia* to take up foreign particles. Young sea-anemones are often found distorted and looking very dirty from the excess of foreign matter which they have taken into the ectoderm. The particles are usually embedded in the protoplasm, but sometimes they are surrounded by a vacuole, showing that digestion is in progress. The identity of the particles with those in the stomach of the parent would indicate that they are not products of the metabolism of the animal itself.

Throughout the various groups of the animal kingdom mesodermic cells have been shown to possess the power of ingestion, both of useful and of useless things, and of matter furnished by the animal itself or foreign to it.

In the jelly-fish (*Aurelia aurita*) many ovarian ova are surrounded by wandering cells and devoured. During the metamorphosis accomplished by the larvæ of many star-fishes and sea-cucumbers (*Auricularia* and *Bipinnaria*), the mesodermic cells swallow bodily the débris of the disappearing organs. This is not confined to echinoderms, but may be observed in ascidians, while Schneider showed that resorption of the generative products by amœboid cells occurs in leeches, and Preyer* that portions of red corpuscles of extravasated blood are eaten by the white blood-corpuscles of amphibia. So far the ingested material has been furnished by the organism itself; but materials foreign to the body have been shown to be taken up by these digestive cells. Among others, Schultze demonstrated it among sponges, Haeckel in sea-slugs (*Tethys*), and Metschnikoff† in echinoderm larvæ, sea-anemones, and nemertian larvæ (*Pilidium*), and I have myself fed the motile blood-cells of Anodonta with human blood by injecting this substance into the pericardium, and after a time examining the blood of the

animal, when I found many of the large amœboid cells of the mollusk enclosing one and sometimes two human red blood-corpuscles. Besides indigo and carmine, aniline blue, blood, milk, starch, cinnabar, particles of glass and charcoal, minute egg-cells, and solutions containing bacteria have all been successfully experimented with by different investigators.

The blood and milk were in several cases not only ingested, but digested and absorbed, as were also the bacteria, whether introduced artificially or when watched in animals suffering from diseases in which bacteria were found already in the blood. There seems to be some power of selection among these amœboid cells of complex bodies, just as there is among rhizopods, for, while they will seize upon and devour the various substances mentioned, living eggs have been introduced, fertilized, and developed among amœboid cells without harm, but it was found that they were at once ingested when dead. At times no attempt seems to be made at ingestion by the amœboid cells, and they act as prophylactic agents simply by grouping themselves about the harmful body to form an encysting plasmodium. This process is common in all classes of animals. The power of cells to ingest foreign or harmful materials has been less frequently described among higher animals, on account of the greater difficulty attending observations, and because the more highly developed the animal the more marked the division of labor among its component cells. Whilst in the colonial monads and lowest metazoans each morphological unit retains an individuality as to the prehension of food, nutrition, sensation, and reproduction, in higher forms certain cells become largely protective in their character.

This is true of the cells derived from the epiblast, which make up the stratified pavement and squamous epithelium, and the protective ciliated cells. It is, however, in the tissues of mesoblastic origin that we must look for the most numerous examples of cells which have retained their mobile and ingestive powers. The blood, lymph, connective tissue, and dermal cells will include most of those which have been found to exhibit this power. They have, from being so placed in the body as to be protected from external insults, retained their amœboid characteristic,—mutability of shape. This is essential; for a cell which

* Virchow's Archiv, Bd. xxx. p. 423 (On Amœboid Blood-Corpuscles).

† Researches on Intracellular Digestion of Invertebrates, Arbeiten Zool. Inst. Wien, 1883. Quart. Jour. Micros. Sci., January, 1884.

has become fixed by the differentiation of a firm membrane from the enclosed protoplasm is like an encysted rhizopod, and no longer capable of ingesting foreign particles of any kind; but the cells possessing this power, as we have seen in the numerous instances cited, act constantly as prophylactic organs or agents. In the processes of resorption they evidently take a leading part, devouring those tissue-elements which have fulfilled their part in the bodily metamorphosis. That they assist materially in the introduction of food-particles into the chyle seems very probable. The chyle-vessels, or lymphatics, of the villi lie in the centre of those organs and act as drainage-pipes. Analogy would indicate that the undissolved nutritive particles, being incapable of reaching them by osmosis, are taken up and passed into them by the epithelial and parenchymatous cells of the villi. That there is an active part of this kind taken by these cells is probable, for in injections of the chyle and lymphatic vessels none of the injected matter escapes into the surrounding tissues. Von Recklinghausen says, "It is reasonable on *a priori* grounds to consider that the epithelial coating of the chyle and lymphatic capillaries present special peculiarities, which stand in relation to the absorption of materials from the surrounding tissues, and which may, at any rate, at certain times facilitate their passage. . . . If we consider the phenomena of the absorption of fat, it appears absolutely requisite to assume not only that there are foramina in the walls of the capillary lymphatics, but that there are channels in the surrounding substance of the parenchyma in the case of the villi, though in regard to other rootlets of the lymphatic vessels their existence appears less requisite, since their contents, apart from the lymph-corpuscles which are probably formed in their interior, ordinarily consist of a fluid destitute of any undissolved particles, or oil-drops."*

This seems to me an unnecessary assumption, even granting that such small openings are known to occur in some lymphatics, for the villi would then simply act as strainers, and the only requirement for the entrance of food-particles into the lumen of the chyle-vessels would be that they be of a size capable of passing through

these foramina; the cells of the villus would be passive. Trophic phenomena, however, seem to indicate that these cells have some active function, and, no matter how much pabulum the intestines may contain, at times it will not be passed on into the chyle to any great extent. The resorption of serous fluids through stomata as described by Von Recklinghausen (in the central tendon of the diaphragm of mammals), by Schweiggerseidel and Doziel (in the wall of the *cisterna lymphatica magna* of frogs), and by Dybskowski (in the pleura of the dog), is a different matter from the absorption of material foreign to the body and containing numerous undissolved particles.

Why may the epithelium of the villi not act as do the ectoderm cells of sponges, which, according to Lindenfeld, take up foreign particles and pass them on to the wandering mesodermic cells below? Living mobile cells in other parts of complex bodies have been found analogous in their functions to such cells in lower forms: why not here?

In positions where foreign particles of a harmful nature are brought in contact with vital parts, they are rapidly seized upon, and either digested or rendered comparatively harmless by amœboid cells. This is well illustrated in the gasteropod *Carinaria*, sometimes called "Venus' slipper," or the "glass nautilus." On the inner surface of the contractile walls of the excretory organ of this animal there is a distinct investment of granular cells which are supposed to produce the renal concretions. These concretions are, however, not formed by the animal, but are foreign bodies. Since this organ connects the pericardium with the exterior and is constantly driving water inwards and mixing it with the blood which is returning to the respiratory organs from the general circulation, these cells are posted here to pick out any foreign impurities harmful to the organism which may be swept in with the water.

That proper search will bring to light many other prophylactic organs there is little doubt; but, from what we have already seen, it is evident that the amœboid or motile cells of the body function as aids to tissue-metamorphosis by seizing upon the decomposing cells. Dr. Chambers, in his "Renewal of Life," says, "The most active metamorphosis of the

* "The Lymphatic System." Stricker's Manual of Histology, pp. 221, 223.

body possible, the highest development of life in every part, is health; the complete cessation of metamorphosis is death; partial cessation or arrest is disease." He points out morbid phenomena as dependent upon either "deficiencies of nutrition, or form-building," or upon "deficiencies of moulting, or form-destruction." It is with this latter cause of disease that the prophylactic cells of the body are constantly combating. "Disease of destruction or of deficient moulting arises when the functions whose business it is to remove effete products from the tissues are inefficient; restoration to health we often see come to pass independent of any interference from without by what is allegorically called 'an effort of nature;' wounds heal, diseases cease, in men and animals who have none to help them; the event comes about not in consequence of the driving out of any *materies morbi*, but on the resumption of their normal functions by the diseased organs the full vital force regains its influence in them, and they recover. The social disease of the 'strike' is cured by the hands going back to work again."

Now, it has been seen, in a rat suffering from septicæmia, that the white blood-corpuscles take up the bacilli which are regarded as the cause of the disease, and these amoeboid cells have been watched until the ingested bacillus has grown gradually more and more indistinct and at last faded away: in fact, it has been digested. Other cells do not seem capable of digesting or destroying the bacillus, and it remains like a filament sticking from the apparently dead cell. It is under such conditions of lowered vitality that the hundred and one so-called "specific germs" do their mischievous work, not when they find the prophylactic agents of the body in a vigorous condition. This is evident when we look on the list of bacteria constantly to be found in the healthy body: almost every form which at times is said to be the specific cause of some disease is to be found. In the writer's opinion, the sooner practitioners leave off fighting bacteria with germicides the better, for it has repeatedly been shown that it is next to impossible to destroy these germs, some of which will ferment carbolic acid as readily as others ferment milk. Treatment calculated to stimulate the lowered vital functions is what is called for in diseases due

to a failure in nature's means of destroying and carrying off effete and harmful particles. Bacteria may be, as Dr. Formad has pointed out, the *causa mortis*, without being the *causa morbis*. The system of lowered vitality cannot so readily withstand the deoxygenation of blood and tissue attendant upon the presence of innumerable bacteria (which increase in direct proportion as the tonicity and vital resistance decrease) nearly so well as the system in full vigor; and, being once down, it succumbs to a foe not new, but with which it has previously been able to cope by means of the never-failing activity of its tissues.

I am, after consideration of this subject in as many lights as possible, disposed to regard the function of the amoeboid cells of the body as prophylactic in character, tending to convert harmful particles, whether foreign or the result of tissue-metamorphosis, into harmless ones; and that they are not especially destined for the regeneration of tissues, since these are well known to renew themselves through fission, gemmation, and endogenous cell-formation.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.,
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DERMATITIS MEDICAMENTOSA.

IODIDE of Potassium Eruption.—Dr. James A. Lindsay (*British Medical Journal*, March 29, 1884) reports a case of eruption from iodide of potassium. A patient suffering with paralysis of the arm was ordered the iodide in doses of three and three-quarter grains. Of these she had taken two when she began to feel sick and went to bed. A severe headache set in, accompanied by an intense sensation of itching in the skin, which began between the shoulders and spread rapidly thence over the trunk, upper extremities, and face. When she scratched the parts affected, she experienced a feeling like the stinging of nettles. Following the itching there came an eruption of blisters, each lesion surrounded by a pair of bright-red concentric rings, the larger half-dollar size. The body was quite covered with the eruption, and there were two spots on the thigh. There were patches on the face even running up into the nostrils, and severe sore

throat, supposed to be due to lesions on the pharyngeal and buccal mucous membranes. There was little, if any, nasal or conjunctival catarrh. The headache, heat of the body, and prostration were extreme. Notwithstanding these symptoms, the patient continued to take the medicine for a week, but in diminished doses. At the end of a week the blisters had dried up, and when seen by Dr. Lindsay, ten days from the beginning of treatment, the only eruption left was made up of reddish-purple rings, somewhat larger than half a dollar, situated chiefly about the arms and shoulders. In the centre of each ring the cuticle was broken and shrivelled as from the drying of a blister. There were other symptoms of iodism. The paralysis was cured.

Morphine Eruption.—Kern (*Wien. Med. Presse*, No. 18, 1883) gives the case of a patient, 35 years of age, to whom a suppository containing one and six-tenths grains of muriate of morphine was administered at noon. The next morning he sought his physician complaining of intense pruritus extending over the entire surface. Erythema supervened almost simultaneously, beginning about the perineum and scrotum. At various points scratching had given rise to the appearance of small bullæ. There was considerable fever. Next day the fever had diminished, but the erythema had spread over the entire surface, sparing only the lower extremities. The penis and scrotum were much swollen. Desquamation took place by the end of a week.

ABSORPTION THROUGH THE SKIN.

Günther (abstract in *Monatsh. f. Prakt. Derm.*, 1883, No. 9) has made experiments with positive results on the absorption of aqueous, ethereal, and alcoholic solutions through the human skin, skillfully contrived to guard against fallacies. The leg and foot were enclosed in a box and completely isolated by closely-fitting caoutchouc. When a one-per cent. ethereal solution of pilocarpin was applied in the form of spray, the characteristic effect of the drug was obtained. Applied in the same way, apomorphia produced nausea and feeling of indisposition, although not positive retching.

DISEASES OF THE SKIN DUE TO DIABETES.

Kaposi (*Wien. Med. Presse*, *Annales de Derm. et de Syph.*, January 24, 1884), in

a paper on the subject, calls attention to a peculiar bullo-serpiginous form of gangrene occurring in diabetes. One case, a woman, 51 years of age, showed an elongated triangular patch of gangrene on the internal middle third of the leg, a second half-dollar-sized patch below the crest of the tibia, and a third small patch on the outer side of the calf. On the anterior surface of the leg, enclosed as it were by these three patches of gangrene, fifteen or twenty pea- to bean-sized bullæ could be seen, of round or oval contour, tense, and filled with a turbid fluid. Where a bulla had been ruptured here and there the raw surface underneath could be seen, covered with a yellowish eschar. Each of the gangrenous patches was surrounded by a ring of bullæ, the process being evidently the formation of bullæ in the first place, these being followed by gangrene, the whole taking a serpiginous course. Kaposi, after having excluded all the various causes which might cause gangrene, concludes that the presence of sugar in the tissues was the cause in this case. As the patient improved on the use of Karlsbad water, the sugar diminished in the urine, and the gangrenous patches healed over. Later, however, a relapse took place, new gangrenous patches supervened, and the patient died.

In order to explain this peculiar process, Kaposi passes in review all the various diseases of the skin which can be caused by diabetes, as these have been reported by various observers. These are as follows: 1, anidrosis or asteatosis of the derma (xerosis); 2, pruritus cutaneus; 3, chronic papular urticaria; 4, acne cachecticorum; 5, roseola and erythema; 6, eczema, especially of the genitalia, balanitis, mycosis, furunculosis, and gangrenous vulvitis; 7, diabetic paronychia; 8, furunculosis and anthrax; 9, gangrene.

Examining more closely the characteristic features of these dermatoses in relation to diabetes, Kaposi points out that, so far as gangrene is concerned, the first symptom in a number of recorded cases has been the formation of bullæ. The characteristic points in this form of gangrene are its appearance in disseminated points and in certain regions in the form of cutaneous lesions, making a serpiginous progress, with consecutive reparation and elimination of the derma.

Kaposi also lays stress upon the commu-

nity of origin in each of these dermatoses relative to diabetes,—the common cause in each case being the presence of sugar in the tissues. Sugar has, indeed, been found in all the tissues, the secretions, sweat, pus, etc. The excitation produced by sugar, or by one of its products of decomposition, sometimes causes alteration in the sensory nerves, with pruritus, sometimes alterations in the secretory and vaso-motor nerves, with consequent anidrosis, asteatosis, or urticaria, or sometimes, finally, inflammation by direct irritation of the walls of the vessels and other tissues or elements of tissues. These last do not, however, show a strong tendency to inflammatory proliferation, but, on the contrary, are greatly disposed to necrobiosis. It may happen that a feeble intermittent excretion of sugar, or a diabetes of long duration, may induce a gradual toleration of the tissues, a preponderant proliferation with a feeble destruction of tissue. If this is admitted, it will account for a case of papillomatous eruption coming under Kaposi's care in an elderly physician with diabetes. Here a sudden circumscribed inflammation of the back of the hand was followed by ulceration, and later by warts and excrescences, the disease finally involving the fingers, forearm, and elbow, and resembling lupus verrucosus or syphilis. Scraping, with lotions of corrosive sublimate and the application of mercurial plaster, effected an almost complete cure of the skin-disease. The patient died later of diabetic coma.

THE THERAPEUTICS OF SKIN-DISEASES.

LUPUS.—Unna scrapes the lupus nodules with the sharp spoon, and applies the following as a plaster:

R Pulv. amyli, ʒss;
Glycerinæ,
Mucilaginis acaciæ, āā gr. cl;
Acid. pyrogallici, ʒi.—M.

Another preparation which Unna employs with great satisfaction is corrosive sublimate. He uses the following plaster:

R Hydrarg. bichlor. corros., gr. v;
Acidi carbolic, ʒv;
Zinci oxidi, ʒiii.—M.

A third is the following:

R Hydrarg. bichlor. corros., gr. xv
ad ʒj;
Sodii sulpho-ichthyolati, gr. lxxv
ad cl;
Aquæ destillat., fʒiii ʒi.—M.

The sulpho-ichthyolic acid neutralizes the keratolytic properties of the corrosive sublimate, so that the mixture acts only on the diseased tissues, while leaving the healthy epidermis untouched: it also, if we understand Unna, aids in healing over the wound when the lupus tissue has been destroyed. Sulpho-ichthyolate of sodium has not yet reached the American drug-market.

Dr. Collier (*Med. Times and Gazette*, April 26, 1884) uses in lupus vulgaris the officinal solution of sulphurous acid, either pure or diluted with one to four parts of water. He also employs an oil made by dissolving the anhydrous acid (a concentrated alcoholic solution of the gas) in castor or olive oil. Occasionally he dilutes the acid with glycerin. The cases treated were all ulcerated conditions of the disease, and the ulcers were in each of five cases healed over very satisfactorily.

RINGWORM ("ECZEMA MARGINATUM").—In the intractable form of ringworm occurring about the genitalia and thighs, and sometimes (wrongly) called eczema marginatum, R. W. Taylor (*Jour. Cut. and Venereal Dis.*, February, 1884) uses a solution of four grains of corrosive sublimate to the ounce of tincture of myrrh, painted upon the part twice daily. The simple and compound tinctures of benzoin may also be used as vehicles for the parasiticide.

(Further experience, reported in a more recent number of the journal, leads Dr. Taylor to prefer a two-grain solution of the sublimate to begin with, the strength to be increased later to four grains. He also now gives the preference to compound tincture of benzoin as a vehicle.)

SCROFULODERMA.—Mr. Milton (*Jour. Cut. and Venereal Dis.*, April, 1884) has recently been giving the results of his extensive experience in the treatment of "strumo-derma," and his practice differs so entirely from that almost universally in vogue as to make it worthy of remark. His system consists in the unsparing use of purgatives and the enforcement of a light diet. The purgatives employed are calomel and salines. A dose of the former, alone or with a little gray powder, is given two or three times a week at bedtime for a fortnight, after which it is withheld for two, three, or four weeks, the longer intervals being observed in cold weather; the saline is taken every morning, both being

prescribed in such doses as will insure conjointly daily free action of the bowels. Beyond this nothing is done as regards the strumo-derma. If the appetite fall off, nitro-hydrochloric acid can be given with some bitter infusion, and occasionally towards the close the patient derives benefit from an acid solution of iron. As an outward application, Milton uses simple water-dressing and zinc ointment. So soon as the surface is healed, blistering fluid may be applied to hasten the filling up of the depressions left behind. A light unstimulating diet is ordered; and beer, spirits, and over-free use of butcher's meat are forbidden. The result of this treatment in eighty-two cases was, in all those remaining under observation, highly successful.

PITYRIASIS CAPITIS.—Unna considers this affection as requiring the employment of parasitocides, although he is not at all sure whether it is in any case of parasitic origin. He orders nightly applications of oil, or, if there is much inflammation, oil and lime-water, to the scalp, which is then covered with an impermeable cap. In the morning a gentle shampooing with soap and water is practised, and the hair is brushed, but not combed. The scales once thoroughly removed, the nightly applications of oil are discontinued, and each daily washing is followed by the application of the following ointment:

R Pulv. zinci oxidi,
Sulphuris præcip., āā ʒss;
Axungiae, ʒv.—M.

Or, instead of this, an ointment made up of fifty grains of sulphur to the ounce of benzoated oxide-of-zinc ointment. Three to six weeks suffice, according to Unna, for a cure. He occasionally gives iron and arsenic. Unna considers sulphur the most valuable of all remedies in pityriasis capitis, and next to this he places the mercurial preparations, particularly red precipitate. He gives only an inferior position to tar and its derivatives.

Besnier and Doyon usually order the hair cut close (except in women), then cleansed with decoction of quillaya or soap, and, after all scales and grease are removed, inunctions with a five-per-cent. naphthol ointment every evening, or with a five-per-cent. solution of naphthol in oil of benne. In women with long hair, twice a week will suffice, and the scalp is

to be cleansed next morning with hot decoction of quillaya, and afterwards rinsed out with pure water and dried.

THE INTERNAL ADMINISTRATION OF CHRYSAROBIN (CHRYSOPHANIC ACID) IN SKIN-DISEASES.—Dr. Stocquart (*Annales de Derm. et de Syph.*, January 25, 1884) has used chrysarobin in 61 cases of skin-disease with excellent results: of 32 cases of eczema, 30 were cured; of 5 cases of psoriasis, 3 were cured and 2 improved. Cases of ecthyma, impetigo, and acne also yielded to this treatment. The drug was usually given suspended in water, the average dose being about one-sixth grain per diem for children, and one-half grain for adults. Diarrhoea, nausea, and vomiting were brought on when large doses were used. The drug was also given hypodermically.

NOTES OF FOUR CASES OF VARICOSE VEINS TREATED WITH HAMAMELIS.

BY B. F. NICHOLLS, M.D.

IN April, 1883, I read in the *Philadelphia Medical Times*, No. 402, an article by Dr. J. H. Musser on "The Treatment of Varicose Veins with Hamamelis." A few days after I read this article, Mrs. W., a married woman, age 35, called at my office on account of swelling and varicose veins of the left leg. On examination, I found the left leg considerably swollen, with here and there large dark spots, which on pressure were quite soft and somewhat tender. These spots were as large as eggs, and situated on the inner aspect of the calf. The right leg was all right. Mrs. W. was three and a half months pregnant with her fourth child. She had always experienced trouble with the veins of her left leg while pregnant, beginning about the third month of pregnancy and continuing till delivery. In her former pregnancies her leg had been treated by bandaging, which afforded some relief, but her distress was so great that at times she was compelled to seek relief by lying down. I concluded to try the hamamelis, and ordered her to take one teaspoonful ext. hamamelis four times a day in a wineglassful of water. She began to improve at once, and continued to take the drug till delivered. Her leg gave her no trouble, the swelling and vari-

cose veins disappearing altogether. Mrs. W. is again pregnant, and the varicose veins appeared again at the usual time. She is now taking hamamelis with success.

The second case is a young colored man, age 30; has had varicose veins for two years. He got some relief from bandaging, but relief was only temporary. Last November he came to my office with a ruptured vein, considerable oozing of blood. Put on a compress and ordered hamamelis, teaspoonful every three hours. Saw him next day, took off compress, no bleeding. Continued hamamelis. Did not see him again for two months, when he reported at my office well. Have seen him several times since, and he has had no return of his varicose veins.

The third case was a woman, age 50 years; was a washerwoman; had had varicose veins for a long time; did not remember when they first came; was treated by adhesive strips and bandage, but always returned after the bandages were left off for a short time. I gave her hamamelis, two teaspoonfuls three times a day in water. She got entirely well in two months, and has remained so ever since.

The fourth case, a woman, age 47 years, sent for me May 10, 1883. I found her sitting in a chair, bent forward till her face was between her knees, her hands clasped firmly together, her legs stuck out in front, covered with wet cloths. I do not think I ever saw in my life such a picture of utter hopelessness as this patient. When I approached her, she looked up and in the most piteous voice exclaimed, "For God's sake, can you do anything for me?" On examining her legs, I found the cause of all her trouble: both legs were a mass of ulcers from the knees to the ankles. From the ulcers was oozing a clear fluid, which soon turned the cloths black. Situated a little behind the knee were several bunches of varicose veins. I thought I had found the original trouble. On inquiry, she said at first, some five years ago, her leg was full of large veins and considerably swelled, and the ulcers came afterwards. I put her on extract of hamamelis, a teaspoonful every three hours, and told her to keep cloths wet with hamamelis applied to the leg. She recovered in two months, and all she has left to remind her of her former trou-

ble is considerable discoloration on the anterior aspect of her legs. She walks all about the city, experiencing no trouble whatever.

The extract of hamamelis used in all my cases was procured at Bullock & Crenshaw's.

In conclusion, I would say that I consider hamamelis almost a specific in varicose veins from almost any cause. I did not find it disagree in any way with my patients. It is not at all unpleasant to the taste.

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AN INTERESTING CASE OF POISONING FROM VERATRUM VIRIDE.

BY LLOYD N. HORWITZ, M.D.,

Late Resident Physician to Philadelphia Hospital.

WILLIAM M., white, æt. 38 years, admitted to the Philadelphia Hospital April 27, 1883. Symptoms of commencing typhoid fever were present, and the patient ran the usual course of the disease, convalescence setting in on the twenty-second day. On the evening of the second day of his convalescence, or twenty-three days after his admission, the poison was administered through a mistake of one of the attendants of the ward.

It was nearly ten minutes after the ingestion of a teaspoonful of the official tincture of veratrum viride that the patient was first seen by the writer, and up to that time the drug had failed to produce any nausea or vomiting, as is usually the case when overdoses of this poison have been taken, this prompt emesis which it usually produces being the probable explanation of its lethal inactivity, for, in the act of vomiting, the medicine is ejected with the first matter from the stomach.

Very great depression of the powers of life was observed, the action of the heart exceedingly weak and feeble, the pulse almost indistinguishable, the surface of the body cold and covered with a clammy sweat, and the temperature reduced below normal about one degree. The globes of the eyes were prominent, lending a peculiar staring appearance to his countenance, and the pupils decidedly contracted. The patient experienced some dyspnoea, and the respirations were shallow and labored.

He was restless, and the countenance bore an anxious expression; the delirium, which had almost subsided before the administration of the drug, returned with renewed vigor. It was of a low, muttering character, and continued so for some twelve hours after the administration of the poison, when it was replaced by a condition of semi-stupor, which abated but little up to the time of his death. No numbness or tingling was complained of, and tactile impressions, though not entirely absent, were very faint.

Measures were immediately taken to remove from the stomach any portion of the poison which it might contain. Mustard-water, followed by a well-diluted solution of about thirty grains of the sulphate of copper, was administered, and in a short time free vomiting was produced. The stomach-pump was then resorted to, and the stomach thoroughly washed.

Under the use of artificial heat, brandy both by the stomach and rectum, and ammonia, in a few hours the respiration became less embarrassed and shallow, the pulse became fuller and stronger, the anxious expression of the countenance lessened, and a condition of general physical quiescence ensued.

The action of the heart, however, never entirely recovered its strength, and the number of pulsations per minute reached fifty-two as the maximum some six hours prior to his death.

On post-mortem examination, the thoracic viscera were found in a normal condition, except a slight increase in the pericardial fluid.

The stomach was almost empty, and its mucous membrane showed unmistakable evidences of acute gastritis, the inflammation, however, not being generally spread over its entire surface, but appearing in spots, the congestion gradually lessening into the surrounding healthy tissue.

The intestines exhibited the usual ulcerations of Peyer's patches, but no point of perforation could be distinguished.

The patient undoubtedly recovered from the poisonous effect of the drug, but the depression of the vital powers which its ingestion caused, when superadded to the already prostrated condition in which the fever had left him, undoubtedly produced the fatal termination.

July 17, 1884.

TRANSLATIONS.

THE CHOLERA OF 1884.—M. Jules Guérin, at the session of the *Académie de Médecine* of July 22, read a communication upon the present epidemic of cholera in France. Having himself witnessed the six epidemics of cholera which have visited France since 1832, and having taken an active part in the treatment of cases during these epidemics, he speaks with confidence based upon experience and knowledge. Taking the report of the commission recently sent by the government to study the cholera at Marseilles and Toulon as his theme, he insists first that there is no evidence that the disease was imported, but, on the contrary, the local conditions being favorable for its development, there were no grounds for the belief of its spreading by communication, patients being attacked simultaneously in widely different parts of the cities, thus showing the operation of a general, extended, and widely disseminated cause. The disease, however, was genuine cholera. The report of the Commission also bears involuntary testimony to the truth of the statement that "there are not two sorts of cholera: cholera nostras and Asiatic cholera are the same." Finally, he insists upon the value of prophylaxis by removing filth and improving hygiene; and especially upon the importance of taking the premonitory diarrhœa as a warning of the approach of cholera, and treating it promptly. After a lengthy discussion, he submitted the following conclusion:

1. Conforming to the teachings of the greatest masters of medical science from the time of Hippocrates to our own day, he had always considered the evolution of epidemics, and of cholera epidemics in particular, as products of certain medical constitutions resulting from successive modifications of the atmosphere and of the organism.

2. Under the control of these modifications, cholera epidemics are ushered in by derangements of the health, characterized especially by persistent diarrhœa, among infants at first, among adults and the aged later. This he had noticed at the approach of all the epidemics of cholera since the year 1831 (more than a year prior to the epidemic of 1832), and he had also noticed it in the four great epidemics which have occurred in France

since 1832,—in 1849, 1853, 1866, and 1873.

The existence of these diarrhœas, to which he had given the name of "premonitory diarrhœas of epidemics," has been confirmed by the best observers of all lands.

3. At the time of the outbreak of the cholera epidemics, and during their prevalence, there are observed three other kinds of diarrhœa, which are not only the continuation of the preceding, but are also three more advanced expressions of the cholera intoxication. The first category is that in which the cholera in certain localities does not pass beyond this diarrhœa, while in neighboring situations it acquires its full development. The second category is that which invariably precedes the development of individual cholera, and constitutes its first stage. The third category is that which limits itself to certain quarters, streets, or sides of streets which usually escape such attacks in virtue of an exceptional immunity. He then proceeded to show that these three classes of diarrhœas are only expressions, varying and graduated, of the cholera intoxication.

4. He had proved that before the collective explosion of the cholera, and before the date assigned to such outbreak, there were always some cases of real cholera, though isolated and unnoticed or reported as *cholera nostras*. So that it might be said that the *official* cholera always arrived after the *real* cholera,—that which is surrounded by the prodromes of the epidemic and manifests itself almost always at the same time, and on the same day, if not the same hour, in different quarters. This has been observed in all the epidemics.

5. Contrary to the doctrine of importation is the fact that different parts of France have continued for months, if not for a year, in daily communication with different centres occupied by cholera, without contracting the disease, and when the epidemic did appear in some of them, as in Paris in 1832 and in Havre in 1873, it was impossible to discover a single fact which would be able to support the pretext of importation.

6. The contagiousness of cholera,—a contagiousness established by a number of incontestable observations,—which he had always admitted, constitutes only a relative or subordinate fact for the localities, for the individual, and for the disease it-

self; to the preceding conditions of aptitude, receptivity, and contingent activity, which explain wholly the impotence of transports to long distances, and the frequent sterility of individual contact.

7. Finally, the epidemics of cholera are subject to laws which govern the evolution and propagation of other virulent and infectious maladies; and the different denominations into which the forms and degrees of cholera—real, cholera nostras, and cholera sporadic, epidemic, or Asiatic—have been arbitrarily separated have no more reason for their existence than if the same titles were applied to smallpox, scarlatina, or measles, in their various clinical manifestations.

8. In conclusion, and as practical and logical consequences of the foregoing facts, the sanitary measures employed to-day [in France] in order to prevent the spread of the Asiatic cholera should be for the most part considered effete institutions, which some day will be replaced by the system of house-to-house visitation,—a system inaugurated as long ago as 1849 in England, where, out of one hundred and thirty thousand cases of premonitory diarrhœa, properly proved, only two hundred and fifty developed into fatal cholera asphyxia.

ELECTRICITY AS A PROTECTIVE AGAINST CHOLERA.—M. Romaine Vigouroux, in a short communication to the *Progrès Médical*, No. 29, announces his conviction that electricity, applied in the form of the electrical bath of several minutes' duration daily, is able to exercise such an influence upon the organism as to enable it to successfully resist cholera. He concludes that among the means generally approved as prophylaxis in cholera, statical electricity practised daily is the method whose efficacy is the most probable. It acts by the development of ozone,—an antiseptic *par excellence*,—and by the stimulation of all the functions of the organism, and especially of nutrition.

THE TRANSFUSION OF PEPTONIZED BLOOD.—M. Afanassiew, acting upon the knowledge that blood containing a certain proportion of peptone loses the property of spontaneous coagulation, has experimented with peptonized blood in transfusion. He reported that the results in animals were very encouraging.—*Le Progrès Médical*, June 21.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 23, 1884.

EDITORIAL.

THE STATE LUNACY BOARD.

IN the face of some opposition from certain quarters whose vested interests were supposed to be threatened, a law was passed last year establishing a permanent commission in lunacy in the State of Pennsylvania, to which, as our readers will remember, some of our most prominent and able citizens were appointed by Governor Pattison. The board, immediately after organization, went promptly to work, inspecting the various public and private asylums and hospitals for the insane, and investigating the general plan of treatment of patients, as well as supervising their commitment and discharge. They have also given attention to the poorhouses and other localities in which the insane have been kept, and have been instrumental in the removal of a number of such to the State hospitals, where they now receive proper care and attention. Among the abuses that have been brought to the knowledge of the members of the commission is the secret confinement of insane or weak-minded members of families by their relatives, such unfortunates being, in some instances, treated with inhuman neglect, fed on food of the poorest quality, improperly clad, and but partly protected from the inclemency of the weather.

Within the year, several aggravated cases of this character have been brought to the notice of the board. One had been kept chained in an outhouse for twenty-five years, naked and filthy, but, before he could be removed from his surroundings, death had released him from his pitiable state. The other patient was a case of dementia, who for over thirty years had been kept

in a hut, in which he was found by the board without a particle of clothing except an iron bracelet around one of his ankles, attached by a rusty chain to a post in the ground: the movements of the man in thirty years having worn a deep groove in the iron staple to which it was fastened. This harmless old man was removed to the Warren Hospital, where he now is properly clothed, and, if not in his right mind, he at least has enough intelligence to be pleased with his improved condition.

The accidental discovery of these two cases within such a short time leads to the suspicion that there may be others that need to be "saved from their friends." In order to ascertain if there are any others in such a sad condition, the board will presently address a circular to every physician in Pennsylvania, requesting information of any such cases, promising that confidential communications shall be respected.

The friends of the measures taken to protect the rights of the insane were gratified by the excellent appointments made by the Governor in creating the Lunacy Board, and we think that the first annual report of its labors will not only furnish cause for congratulation, but also abundantly justify the law which called it into existence.

HYPERPYREXIA.

IT would be entirely unnecessary to repeat so obvious a truth as is contained in the statement that the temperature record does not express all that is known of the febrile state, were it not that since the use of the thermometer in clinical medicine has become general there seems a tendency to consider increased temperature and fever as synonymous terms, and to rely too exclusively upon the body-heat as indicating the presence or absence of fever and its degree,—a certain marking of the mercury being interpreted as py-

rexia, another as hyperpyrexia. There can be no objection to the use of the term normal, or sub-normal, or hyper-normal, but, as Dr. Goodridge very justly asks in the *Practitioner*,* "Is there not some want of scientific accuracy in the way in which this term hyperpyrexia is currently used in the profession?" High temperature, as indicated by the clinical thermometer, may be brought about by other conditions than pyrexia or fever. Muscular exertion alone can elevate the temperature; this is often observed in children, but it is most marked in adults after tetanic convulsions, due simply to the increased production of heat. On the other hand, the bodily temperature may be raised under circumstances which interfere with heat-discharge, this being relatively diminished, though perhaps absolutely increased. Thus, in certain cases of heat-stroke, both theory and practice agree that heat-retention is the source of danger, and the object of treatment is to increase the heat-discharge. In this case, also, the thermometer cannot be said to express correctly the degree of fever, because the elevation of temperature is not due to fever. It is also well known that after injuries of certain portions of the nervous system, especially of the pons Varolii and the upper portion of the spinal cord, the surface-temperature of the body is rapidly increased. In the words of the writer already quoted above, "These several conditions, then, excessive heat-production, arrested heat-discharge, and deficient heat-regulation, all having for result elevation of temperature in common with fever, and tending more or less to develop into it, I submit are yet distinct from it; and if, for convenience' sake, the nomenclature of fever be applied to them, and they be regarded as in a sense its clinical allies, it should be remembered, at any rate, that they are not its pathological equivalents."

Regarding fever, therefore, as a complex process having a number of factors and varied in its manifestations, we recognize the fact that increased temperature is but one, and frequently not the most important one for the physician to consider, and have thought it well to direct a word of warning against a too exclusive reliance upon the indications of the thermometer, in the diagnosis and prognosis of pyrexia.

LICHEN TROPICUS.

PHILADELPHIA has been justifying its reputation as a summer resort so effectually this year that excessive perspiration, and its accompaniment, the so-called "prickly heat," have been less commonly noticed than usual. Still, there are in the community some persons with irritable skins who suffer greatly from the itching and burning of the eruption upon the body, which they seem especially subject to in hot weather. Although the eruption seems to be connected with sweating, yet that it is not due to want of personal cleanliness is a matter of common observation. The patients are generally fleshy, and often scrupulously clean; they have a delicate skin, and perspire readily on slight exertion. General measures, such as reducing the nitrogenous food, alkaline baths, the avoidance of irritating soaps, frequent change of underclothing, are useful in relieving the tendency to eruption, but sometimes fail to prevent its recurrence. A correspondent in the *Lancet* reports a case where the substitution of flannel for the light merino underwear seemed to be the one thing needful in curing the patient, who, previously very subject to it, was free from it afterwards. The application of hot water to the eruption will relieve itching, whereas scratching seems only to aggravate the malady. What chilblains are to winter, prickly heat is to summer, and, although trifling, they are capable of causing much annoyance and discomfort;

* Article on Hyperpyrexia, July, 1884.

they certainly are not beneath the notice of the physician, who may find his resources for relieving them sometimes severely taxed. Indeed, the recommendation to wear the underclothing rough-side out in hot weather will often win more grateful appreciation from a patient with an irritable skin than a magistral prescription.

SCIENTIFIC MEETINGS IN SEPTEMBER.

DURING September this city will be honored by the session of the American Association for the Advancement of Science, and by the Electrical Exhibition of the Franklin Institute, each of which, in addition to its intrinsic attractions, will bring to us honored guests from abroad, who, we hope, will carry away with them on their return many pleasant impressions of the City of Brotherly Love. Among those who are expected to be in attendance upon the sessions of the Association for the Advancement of Science we notice the names of eminent physicians from all parts of the world, thus affording to our local medical societies an opportunity, which they will doubtless improve, of maintaining the reputation of our city for hospitality.

In the Electrical Exhibition it is proposed to have a department for the express purpose of showing the useful applications of electricity to medicine, which will contain, among the latest improvements, some novelties which will probably be both interesting and profitable to the profession. What with the sessions of the Society and the visits to the Exhibition and the entertainment of distinguished guests, it may be safely predicted that the physicians of Philadelphia will have no idle time on their hands.

SIR ERASMUS WILSON, LL.D., F.R.S., the great English dermatologist, died in London, August 8, aged 75 years.

NOTES FROM SPECIAL CORRESPONDENTS.

RECOLLECTIONS OF STUDENT-LIFE ABROAD.

VIENNA.

TO those familiar with the Kaiserstadt in 1870, what changes are noticed on every hand to-day! Not only has the "Imperial City" changed its outward appearance by adding multitudes of palatial buildings and covering vast spaces where once the green fields delighted the eye, but much that was interesting and picturesque has disappeared forever. The historic bastion where the Austrians so gallantly hurled back in defeat the savage Turks is not the least of the landmarks of fourteen years ago that is missed to-day. I may add that the character of the Viennese has also undergone a marked change, and, I believe, not for the benefit of the foreign visitor.

When we consider the fearful inroads death has made in the medical faculty of Vienna, unequalled in modern times, the list is almost appalling: Profs. Skoda, Oppolzer, Rokitsky, Hebra, Hyrtl, Sigmund, Dumreicher, and many other stars of lesser magnitude, have ceased to shine and enlighten the profession by their brilliant labors.

What names in medical annals are these! My memory recalls the mourning city and the almost regal pomp displayed at the funeral of Oppolzer. Nowhere are funerals more lavishly conducted than in Vienna, where it is a common sight to see a band of music playing at the funeral of a child; but this funeral of the great diagnostician almost surprised the Viennese by its magnificence. Indeed, it was scarcely excelled by that of the great Admiral Tegethoff, which occurred so soon afterwards. I remember how universal was the mourning, and how benumbed was the body medical by the loss of such a prominent member,—to the poor a great loss indeed. But upon this theme I must not enlarge.

The foreign student in Vienna fourteen years ago enjoyed, besides many privileges, an exemption from much that worries his successor of the present time.

The great Allgemeines Krankenhaus (General Hospital), with its three thousand patients and one hundred and fifty instructors, then afforded many comfortable rooms at reasonable rent for those who wished to reside in the hospital. These enjoyed the opportunity of being called at any time, day or night, to interesting and rare cases in the different departments, but especially in obstetrics. I remember that on one occasion I was called to witness the Cæsarean section,—a favor which I highly prized.

A small fee to the watchman would enable

one to see many cases which outsiders knew little about. The private courses also were cheaper, longer, and more satisfactory than now; greed had not then seized upon the minds of the *privatdocents* as it seems to have done at present; Austrian students were less jealous; Americans and English were more united in a common brotherhood, and ill fared the natives who dared interfere with the members of such a corps. Perhaps the luckless adventures of the great Bavarian bully, and the severe handling received by him from a gallant little doctor of Charleston, South Carolina, may not be forgotten by those who witnessed the affair. Those were certainly the "good old times."

The morning work began at the post-mortem rooms in the pathological building, and considerable fun was looked forward to by the students who were daily witnesses of the quarrels between Rokitansky and his old servant. Often in the midst of the profoundest researches this veteran pathologist would stoop to quarrel in considerable earnestness with his faithful servant. Standing over the body during its dissection, he would hurl his irritable remarks at his unlucky attendant. Undoubtedly many young doctors have wished that they even knew as much of pathology as the rough *diener* of the Father of Pathology. Rokitansky received at last from his emperor the baron's title, and it was said that at that time he had attended or supervised fifty thousand post-mortems. Then to the clinic of Hebra, with his cruelties and his wit,—now filling us with anger and pity, and then convulsing us with laughter and dazzling us with his skill; the poor patients, trembling with fright, standing with a cork or wooden plug jammed into their mouths to chew upon in the intensity of their anguish, and Hebra scolding and grinding into the quivering flesh, causing the most exquisite tortures. What a scene it has left on the memory of those who witnessed it! Who can forget the short, ugly man, in his very rough woolly coat and his large gold spectacles?—a very demon of heartlessness he seemed to me. Then few will forget the horrors of the clinic of Sigmund, where he used to sit nervously slapping the napkin on his knee and calling out, "*Weiter, weiter, WEITER!*" The drawing, sleepy, even lazy lectures of the distinguished Braun,—those who listened to him will long remember his peculiar manner. How different the lively, eloquent Latin orations of Hyrtl, where anatomy was made fascinating! His pronunciation of Latin and his familiarity with it in every detail made his lecture-room crowded with scholars who otherwise cared little for his subject. Hyrtl made his ordinary lectures in German almost a perpetual pleasure, and his anatomical specimens have been the marvel and despair of anatomists ever since he discovered his process. To see one of his

specimens, showing even the finest circulation, a perfect net-work of arteries, and the flesh removed by his wonderful skill, is worth a visit to Vienna. He used to assure us that the process was no secret,—that any one could do it *with patience*; but who has yet penetrated the mystery or can imitate the master? His private collection it was a treat indeed to be permitted to visit, and a place in his private dissecting-room was an honor few of us could enjoy, and its possession one of the greatest privileges the writer ever possessed. The light has ceased to shine, and to no one has he left his mantle, although more than one of his assistants had learned to wield the scalpel with much of the teacher's skill.

The brilliant operations of the dignified and gifted Dummreicher are still remembered with pleasure,—somewhat eclipsed, to be sure, by that "lion of surgery," Billroth. What fields of professional clover the student of 1870, 1871, and 1872 in Vienna fairly revelled in! And Vienna was a cheap and merry place in those days. The "Riedhof" and the "Gasthof zum Goldenen Schlüssel," on the Schlüssel-Gasse, quite near the main entrance to the Allgemeines Krankenhaus, were favorite resorts for American and English medical students. What the Latin Quarter was to Paris is the Alsergrund to Vienna.

Let me recall an incident of student-life at that time. No one who shared in the festivities of the Fourth of July, 1871, can forget what a merry gathering it was, and in every respect a success. The long table in a private hall of the "Riedhof" was filled with medical guests, and toasts and songs made it a lively occasion. The meeting was presided over by a dignified and distinguished physician from Baltimore, who won all hearts by his patriotic and elevating speech. At about two o'clock in the morning the good man retired, "to leave the boys to their fun." An unfortunate waiter hurt his head by an accident, but his wounded feelings were quickly healed by a most liberal contribution taken up and presented to him by the guests. In Vienna, pleasures were tempting, and student-balls, operas, concerts, and theatres could then be enjoyed for what would seem little expense to-day.

Suburban excursions, horse-racing, riding and driving, and steamboat-trips on the Danube, made life a holiday indeed. A merry, happy city, but more tranquil and satisfying than to-day. How changed it is now to those who knew and really loved it then!

"Es giebt nur ein Kaiserstadt,
Es giebt nur ein Wien."

* * * * *

The student contemplating a visit to European schools, whether he be a post-graduate or not, should weigh and examine the matter carefully before starting; and perhaps from

one who has spent many years in such schools a few hints may be received with profit.

In general, it would be best to go directly to Germany, leaving the French and English hospitals to be visited on the return towards home. I do not wish to be understood as undervaluing study in London, Dublin, and Edinburgh, but it is better to do the hard work on the Continent first, while the spirit is ready for some self-denial. It is easy to get careless and superficial, if the order is changed. It is best to enter Germany by Bremen; and the steamers of the North German Lloyd are unequalled for comfort and not excelled for safety; and the ten days spent *en route* really gives one considerable opportunity to get introduced to the language, and possibly to people who may be of service on landing and afterwards. For one who has studied German it develops the practical working needed, and for others it affords a foundation for future study which is very desirable.

To rush at once to Berlin or Vienna is not now to be recommended, but, instead, I would advise passing a semester at Freiburg, Wurzburg, or Munich. Of course, many have but a few weeks or months to do Europe in, and for these no plan for genuine study can be offered: the *éclat* of foreign study upon their return must be their great reward.

FREIBURG.

Freiburg, in Baden, beautifully situated on the borders of the Black Forest, possesses advantages for the genuine student well worth considering, although it receives comparatively little attention from foreigners. In the first place, Freiburg affords the best climate, summer and winter, of any university town in Germany; and this is really of the greatest importance to many Americans. Secondly, it is the cheapest place to live in, and one of the happiest, enjoying excellent theatre and opera privileges, concerts, and good society. For the student of medicine Freiburg has a good laboratory, physiological experiment-rooms, and well-managed dissecting-rooms, and a hospital for surgical and medical cases under the best possible government. The medical faculty is well known for its high standing. It is worth while to mention that Prof. Baumbler, the distinguished specialist in diseases of the chest, has spent some years in England, and his valuable assistance and kindness are ever ready for English or Americans. Freiburg is not so much out of the way as its geographical position would seem to indicate. Munich and Vienna are both easily reached from here by the express from Paris. A semester at this university is time well spent, and from here, after acquiring something of the language and professional technicalities, it would be well to go on to Munich and Vienna.

MUNICH.

Probably no city in the world offers more to every professional man than Munich. Rich in art, in music, in libraries and collections of all kinds, it is interesting to everybody and fascinating to most people. Much has been written against the climate of Munich, but, unless one is really very sensitive to changes, the average student, with proper care in the selection of *healthy apartments*, and avoidance of water-drinking and of late hours, will find little to complain of in the climate. It is not a health-resort like Freiburg, but is much to be preferred to Leipsic, Wurzburg, Tübingen, or Heidelberg. The university is one of the oldest and richest in Europe. The grand *aula* is probably unequalled by any in the world, and the standing of the university is very high. The advantages for the medical student are very great.

Without attempting to claim more for Munich than justice will allow, it can be honestly said that, comparing the medical advantages of Berlin with New York, and Vienna with Philadelphia, Munich might be compared to Boston. The character of the medical faculty is very high indeed, and the opportunities for deep study are not excelled anywhere.

Prof. Von Gieth, the dean, is an earnest worker, and very kind and attentive to foreigners. Nussbaum, called "the Napoleon of Surgery," is a great favorite, and reminds one more of American surgeons by his dash and boldness in operating.

The hospitals of Munich are accessible and well managed. The lying-in hospital is probably one of the best of its kind to be found anywhere. Under the late Von Hecker—its lamented head—it won great reputation. It is so constructed that, the first ward being filled, no new cases are received in it until all at present occupying it have recovered or been discharged. It is then thoroughly cleansed and disinfected, remaining empty until all the other wards have had their turn. In this way puerperal fever has become a rare event in the Munich Lying-In Hospital.

The requirements for graduation at Munich are membership of the university, besides membership of the medical department of the university, certificate of five years' medical study, lectures, and hospital experience, and attendance on many cases of obstetrics, certificates of character, proficiency, and citizenship, and a deposit of about four hundred guildens for the expenses of graduation. The candidate is recommended after application by the medical faculty, and his papers are examined and voted upon by the senate of the university. If accepted, he is notified to prepare for examination, the fee for which is three hundred guildens* and is not returned in case the applicant fails, but he is allowed a second examination at the end

* About one hundred and fifty dollars, gold.

of a year. The medical faculty invite the candidate to meet them on a certain day and hour at the hospital for practical medical examination. After entering the ward, a certain patient is selected for examination, for whom diagnosis, prognosis, and treatment must be made, and afterwards the medical history written. In the event of death occurring within twenty-four hours, the post-mortem must be made and reported also. The candidate, if successful, receives a second invitation to meet the faculty in the surgical ward and examine and treat a surgical case; afterwards, an order requiring him to attend a case of obstetrics at the lying-in hospital, and report its progress and termination.

The practical examinations having been accomplished with success, the candidate is next invited to present himself at the faculty's office to receive written questions requiring written answers. Upon entering the office, a "cocked hat" (three-cornered paper) is handed him sealed, upon opening which he finds not less than three questions nor more than six, and these upon one department of medicine,—*i. e.*, surgery, obstetrics, anatomy, etc. The writing of these papers must be done at the faculty's office, in a room reserved for that purpose; the room contains a long table, a few chairs, and plenty of paper and ink. The *hausmeister* and a member of the faculty are present. No notes are allowed, and the candidate cannot leave the room except under escort of the *hausmeister*. A failure to answer any one of these questions terminates the whole examination. If the questions are not answered before the end of office-hours, they are forfeited. The written examination in the several departments of medicine occupies about one week. There is no regular order: surgery may lead, or pathology, so that it is difficult to prepare for the next day's work.

The written examinations having proved satisfactory, the candidate receives an invitation to meet the faculty at the same place some evening specified, for oral examination. He comes in full dress, and is shown into the same room where he has wrestled with written questions. Around the same table he sees the medical faculty, the venerable dean presiding, and opposite, at the end of the table nearest the door, an empty chair, which will prove an anxious seat for him before the evening is over. More to be dreaded than the faculty is a deputation of three students, who are permitted to listen, but, fortunately, not to ask questions. On the table is a box containing numbers, and, to the right of the candidate, his first examiner, who has a book of numbered questions on the different departments of medicine.

The candidate reaches forward his hand and draws from the box a number,—say 17,—which he hands to his examiner, who, turning to question No. 17, examines him for

about fifteen minutes. Any member of the faculty can ask questions after the examiner has ended. The next examiner takes the book, another number is drawn, and the same process gone through with. Finally, the candidate is escorted to the library, there to wait the voting of the faculty. Anxious moments these. At last the slow footsteps of the old *hausmeister* are heard approaching; the heart beats faster and the moments seem long; he beckons the candidate and whispers his success. The dean rises and announces the termination of the examination, and, if the candidate has been successful, the honors, if any are decided upon, are declared. Congratulations follow, and the meeting is ended. Another invitation to meet the faculty at the university *aula*, for the ceremonies of graduation, ten days later, is received. The *promotions-vortrag*,* if not already completed, must be finished and sent to the dean, the *thesen*, or arguments to be used with the faculty, must be selected by the candidate and sent to the dean, the programme of the graduating-exercises must be printed, and, a few days before, carried in person by the candidate to each member of the faculty and to high officials of the university. To do this in proper style, the elegant university carriage, upholstered in blue and white (the university colors), is sent to convey the student, now the successful candidate. The coachman and footman are in livery, and the *doctorand*, in full dress, wearing a dress-sword and carrying on his arm a real cocked hat (not the paper torment of the examination), presents a copy of his programme and a polite wish that the distinguished professor shall honor him by being present at his graduation. The eventful day arrives; slowly the gorgeous university carriage drives up to the door of the house where the candidate resides; not a few collect to see the show; away it goes at last and reaches the fine buildings of the university. In the hall a procession is formed. The beadles, bearing the sceptres of the university, lead the way; they are in velvet and black silk gowns, not unlike those of the professors. Next comes the secretary of the university, in tight-fitting uniform covered with gold lace, and wearing a sword. The candidate comes next, in full dress, white cravat and gloves, and dress-sword; then the faculty, in black silk gowns, trimmed with velvet; then the dean of the medical faculty, in green silk gown with green velvet trimmings and green beretta; lastly, the rector, or president, in scarlet robes, with massive gold chain and seal of the university. The procession files into the grand *aula*, a beautiful room, adorned with pictures of princes and potentates. The rector is conducted to his chair, the dean ascends to his dais, the professors take seats at long tables right and left, the

* Corresponds with our thesis.

secretary at his table, and the candidate on an elevated seat just before and below the dean. A railing separates the students from this part of the hall.

The secretary proceeds to read the object of the meeting and the authority of the faculty granting the degree of doctor of medicine about to be conferred. The secretary also reads the name, birthplace, and antecedents and medical history of the candidate. The candidate then reads aloud his *promotions-vortrag*, which being completed, the professors question him publicly concerning his *thesen*. These formal questions being ended, the beadles advance, the sceptres are crossed before the candidate, and he is requested to remove the glove from his right hand, which he places upon the sceptres, and repeats after the secretary the oath of Hippocrates. This being done, the dean rises, removes his beretta, and says, "By the authority vested in me as dean of the medical faculty," etc., etc., "I now extend to you my right hand and greet you as colleague." The newly-made doctor is then brought before the rector, who congratulates him and offers some advice for his future welfare. The procession then reforms, the order reversed, and leaves the hall, and the ceremonies are at an end. The young doctor has commenced his career; the world, with all its doubts and fears and troubles, is before him.

LEIPSIK, BONN, AND HEIDELBERG.

We have briefly considered three of the medical schools of Southern Europe. Leipzig and Bonn are excellent schools, but nearly, if not quite, as expensive as Berlin. The student of chemistry will find in Leipzig probably the best managed chemical laboratory in the world, and also remarkable advantages in physiological experiment. One of the most interesting lecturers and most celebrated professors has long since been called to his rest (no one has yet been able to quite fill the place of the gifted Wunderlich: his presence is still felt, and his teachings are accepted over the whole world). Leipzig is a pleasant place to live in, and is quite a healthy town, but is not so valuable for the student as Munich, where one seems to live in an atmosphere of professional study and investigation. Bonn is somewhat lonely, and, although the professional advantages are good, they are not to be compared with the other places already mentioned.

Tübingen, near Stuttgart, although possessing a hospital incomparable in its appointments,—a perfect model in all that a hospital should be,—and having a medical staff of great ability and activity, is really out of the way for the student, and a very lonely, uncomfortable place for Americans.

Würzburg is a very handsome city, and has a good hospital, and the high standing of its medical school is well known. It is a cheaper

city than Munich, but, of course, smaller and less inviting. The removal of Prof. Von Bergmann is a great loss, and his place will be hard to fill. The medical faculty has a hard-working reputation, and the advantages for the student are very great indeed. The clinic for gynæcology of the celebrated Scanzoni is disappointing, and his assistants are not what one would be led to expect: it is certainly very much inferior to that of Hegar in Freiburg.

Heidelberg is not so much resorted to by American medical students. Its character for wild dissipation and the smallest possible amount of study has prejudiced most parents against it as a desirable school for their sons. Nevertheless, it has many excellent professors and some advantages, and studious men can always be found there.

It is impossible in this paper to mention all the medical schools of Germany: only those which the writer has visited and can speak from personal experience concerning have been noticed. For the American student who has time to spend in real study, Freiburg, Munich, and Vienna are recommended above all others on the Continent to post-graduates.

Since 1870 the excellent medical schools of our own country have taken giant strides forward; and, although much of this improvement has been owing to the influence of the vast numbers of our profession who are familiar with foreign schools and have brought back rich treasures to add to our own, still the *worth* is showing itself here, and Philadelphia is fast becoming the rival of Vienna. It is really very doubtful if, in honest, practical work, the American student can gain very much by going abroad to-day, except to elevate his general intelligence by travel, to gratify his curiosity, or to compare the foreign system of treatment with his own. When we consider the eminent professors of Philadelphia, New York, Boston, and other cities, we may well feel pride in our own institutions and look forward to the time when foreigners shall seek our medical schools in large numbers for improvement, which I believe they could actually obtain at present in many departments. It may be well to quote here from one of our most distinguished professors, Dr. Roosa: "Whatever may have been the additions that the medical profession of this country have made to the common stock of knowledge,—and they have been neither few nor unimportant,—they would have been largely increased by facilities at all equal with those enjoyed in the Old World. We have the men with the brains, but, alas! up to this time, the educated people have about decided that, whatever they may do about ministers, lawyers, and teachers, doctors must educate themselves. By the aid of their fellowships, endowments, and other university establish-

* A Doctor's Suggestions to the Community, p. 81.

ments, the workers of England, France, and Germany have been gathering harvests for decades from fields in which we have only put in here and there a sickle."

"Chill penury repressed their noble rage,
And froze the genial current of the soul."

W. THORNTON PARKER, M.D. (Munich).

FORT UNION, NEW MEXICO.

IPECACUANHA IN CHOLERA.

MR. EDITOR,—From the editorial in the *Times* of 9th instant, it unexpectedly appears that views expressed some time ago upon the therapeutic virtues and possibilities of ipecacuanha have borne fruit. I take occasion, therefore, to say to those interested that the quieting effect of ipecacuanha in cases of severe intestinal pain, with and without gastric and intestinal disturbance, continues a matter of frequent experience. It is particularly in cases where there is no mechanical irritant that its usefulness is best shown. The diarrhoea and vomiting induced by offending ingesta, of course, require their removal as a preliminary step. But there are numerous cases of severe enteric suffering where there is no such foreign body, or where it has passed away leaving this nervous disturbance. And many of the severer cases of cholera morbus, at least by the time a physician sees them, have no mechanical cause present. The agonizing abdominal pain so frequent in the warmer season, and depending especially upon intangible causes, and this whether vomiting be present or not, will yield with greater promptness to large doses of ipecacuanha carefully given non-emetically than to any other treatment that is familiar to me. I do not deny that vomiting directly depending upon the drug sometimes comes on; but even in such cases it is less distressing than the pathological state it supersedes.

I do not believe that ipecacuanha is a sedative in the therapeutical sense of that word. It is a sedative to the patient in allaying his suffering and calming his distress, but I believe it accomplishes this by stimulating, not depressing, the organic nerve whose loss of power is the pathological cause. It is on this ground, as more fully explained elsewhere, that I think similar treatment may be as serviceable in true epidemic cholera as it has been found to be in the endemic cholera morbus.

ALFRED A. WOODHULL,
Major and Surgeon, U.S.A.

DAVID'S ISLAND, NEW YORK, August 15, 1884.

[In another column may be found a statement made before the French Academy by Dr. Guérin, whose experience entitles his opinion to respectful consideration, that there are not two kinds of cholera, and that, in their

pathology, cholera morbus and cholera Asiatica are identical, except in the matter of prevalence. Whether this be true or not, a valid argument in favor of the trial of ipecacuanha in non-emetic dose in epidemic cholera, as advised by Dr. Woodhull, exists in the fact that it has been used with success in sporadic cholera.—EDITOR *P. M. T.*]

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a meeting of the Philadelphia County Medical Society, held May 28, 1884, Dr. William M. Welch, President, in the chair, Theophilus Parvin, M.D., read a paper entitled a

REPORT OF THE OBSTETRIC DEPARTMENT OF THE PHILADELPHIA HOSPITAL FOR THE QUARTER ENDING APRIL 30, 1884.

By the kindness of Dr. Bernardy, my associate in term of service at the Philadelphia Hospital, the entire charge of the obstetric department was given me, while he had that of diseases of women and children. It seemed to me that by this division of labor both the interests of patients and of medicine would be best subserved, and I desire publicly, as I have done privately, to express my gratitude to Dr. Bernardy for his consent to this arrangement. Further, let me gratefully acknowledge the zealous and faithful work of the *internes* serving under me, in the collection of statistics and making observations, without which the preparation of this paper would have been impossible. My debt to these gentlemen, Drs. Phillips, Parkhill, Randall, Lazarus, and Voorhees, is very great. Some of the statistics and observations, or their results, have been given elsewhere, others will be presented you now, and still others wait another opportunity.

And now, gentlemen of the Philadelphia County Medical Society, unexpectedly invited to read a paper before you, and thanking you for the honor, my endeavor will be to present facts rather than theories, results more than reasoning, hoping that possibly some of the facts and results may be of present interest and of future use, and knowing that the discussion they may evoke will have these characteristics.

During my term of service at the Hospital seventy-two women were confined. This number, however, includes two cases of premature labor and one of miscarriage at six months and a half. There was one case of twins. In sixty-nine cases the vertex presented; presentation of a foot, of the breech, and of the shoulder each occurred once; the presentation in the case of miscarriage is not given.

Forty of the seventy-two mothers were primiparæ. Of seventy-three children born, thirty-nine were females and thirty-four males,—a preponderance of female births which is at least remarkable.* Fifty-one of the mothers were white, twenty-one black. The average weight of the white children was seven pounds and a little more than two ounces, that of the colored children seven pounds thirteen ounces and a fifth. There was thus a difference of eleven ounces in favor of the latter. The heaviest child was a white one, its mother a primipara. Its weight was nine pounds and twelve ounces. Comparing the difference between white male and female children, it was a little more than one pound,† while the corresponding difference in black children was only two ounces and one-fifth. Of course the number of cases observed is too small to allow a positive conclusion, but it suggests that the difference between the two sexes in the white and in the black race in regard to weight of the new-born is much more marked in the former than in the latter. If the results obtained in these limited observations should be confirmed by more extensive ones, we would have a race-distinction which is in perfect correspondence with a known ethnological law.

As to the average weight of the new-born, I may repeat what has been published elsewhere. At my request Dr. Phillips found, from examination of the Philadelphia Hospital records of white children born there, that this weight was seven pounds four and eight-tenths ounces. The number from which this result was obtained was one thousand,—five hundred males and five hundred females. The average weight of the males was seven pounds seven and nine-tenths ounces, while that of the females was seven pounds one ounce and seven-tenths.

The average duration of labor in the black women was very nearly fifteen hours, while in the white it was thirteen hours and twenty-five minutes, showing a difference in favor of the latter of more than an hour and a half,—that is, labor is shorter in the white than in

the black women. This result is an unexpected one; nevertheless here again the number of cases is too small to justify a positive conclusion. The duration of labor in white primiparæ was fourteen hours nine minutes; in black, nearly eighteen hours; in white multiparæ, twelve hours forty-two minutes; in black, ten hours sixteen minutes. The duration of the third stage of labor was in the whites twenty-one minutes, and in the colored thirty-three minutes.

And here let me, for the time at least, lay aside these statistics to consider the conduct of the third stage of labor. The subject invites consideration in this paper by the following facts. One of the colored women failing to expel the placenta within an hour after the birth of her child, the gentleman having charge of the case introduced his hand into the uterus and removed the after-birth by piecemeal, or at least the greater portion of it. That patient had septicæmia, and infected each of her neighbors. The colored obstetric ward at this time was terribly crowded, the beds so close together that a patient could almost roll from her own bed into the next one.

Shortly after this I was called to a woman in one of the white obstetric wards, who had been delivered of her child three hours before, but the placenta was retained. The patient's pulse was good; there was no hemorrhage, nothing but the simple fact of delay in the third stage of labor. A little friction of the uterus and compression of its fundus through the abdominal wall caused the expulsion of the placenta in a few minutes. There was no fragment of the after-birth or of the membranes retained. The genital organs of the patient were not touched either by the *interne* or by myself in this delivery, nevertheless she had septicæmia. Finally, a third patient had the placenta retained for nearly five hours, and then it was expelled. She had septicæmia. These three patients recovered.

In studying the phenomena of placental delivery, we find there are three stages,—viz., first, the separation of the placenta from the uterus; second, its extrusion from the uterine cavity after its conversion into a foreign body by its detachment; and, third, its expulsion from the vagina. Delay may occur in any one of these stages, that in the last, of course, being the most easily remedied. The separation of the placenta from the uterus is made by uterine retraction, and probably, instead of being marginal in some cases, central in others, is usually general.

A practical question is here presented: Is this separation facilitated by ligating the placental end of the cord? In other words, Ought the obstetrician to use two ligatures or one? The advocates of two ligatures claim that in this case the placenta, being larger, fuller, firmer, cannot so well follow the retraction of the uterus as it can if thin and

* The general relation between female and male births is 100 to 106. Illegitimacy slightly lessens this proportion,—that is, increases the number of females born; and this is a factor adding to the number of female births at the Philadelphia Hospital, for illegitimate births are there the more numerous, but still it is not sufficiently potent to entirely reverse the law. This abnormal disparity between male and female births is not a mere accident of the three months, for, taking all the births of 1882 and 1883, and adding those of the first quarter of 1884, I find the number is 371, and of these 173 were males and 198 females. It would be interesting to examine the hospital record for a long series of years and ascertain if this disparity is the same; and this it is my intention to do.

While referring to the normal relation between male and female births, and the effect of illegitimacy upon it, I may mention the curious contradiction of these laws given by the statistics of Roumania. These show that the proportion of female to male births is 100 to 116, and, further, this proportion is not changed by illegitimacy.

† The difference in the weights of white male and female children is greater than it should be, from these facts: first, a larger number of female children; second, in two cases of premature labor and in that of twins the children were females, and their weights being small of course reduced the average.

flexible from the loss of blood, and therefore in the former case is more certainly and completely detached. This is doubted by some, denied by others; nevertheless it seems rational. But, admitting its truth, it is certain that if a single ligature be used the placenta is smaller, and hence can pass through a smaller uterine orifice. This practice, no matter what its effect upon the first, facilitates the second stage of placental delivery.

After uterine retraction has separated the placenta, uterine contractions expel it into the vagina, while the abdominal muscles, aided, it may be, in some slight measure by the contractions of the vagina, cause its final expulsion.

In the spontaneous discharge of the placenta from the uterus, it does not seem yet settled whether the placenta usually presents the foetal surface or the margin at the os uteri. The doctrine of Matthews Duncan has probably for the last few years been most generally adopted by British and American obstetricians; my own belief is that it is correct: at least in some thirty cases of delivery, taking the method advised by Dr. Duncan to test the presentation, I found in the majority that the placenta descended through the os with its margin presenting. French obstetricians have not accepted Duncan's views; and indeed the recent observations of Pinard and others seem to prove that the placenta usually presents by its foetal surface.

Now, a practical lesson from this study of the mechanism of placental delivery is that, adopting the view of Duncan, traction upon the cord—a traction which of course is never to be made when the placenta is still attached to the uterus—is mischievous, for it interferes with the normal presentation; but if the normal presentation be that of the foetal surface, such traction facilitates the second stage of delivery.

The time required for the spontaneous delivery of the placenta, as observed by Kabierske in one hundred cases in the Strasburg Maternity, varied from thirty minutes to twelve hours, as is shown by the following table:

24 times	30 minutes.
20 times	1 hour.
25 times	2 hours.
11 times	3 hours.
- 9 times	4 hours.
5 times	5 hours.
3 times	6 hours.
2 times	8 hours.
1 time	12 hours.

Few practitioners are willing to trust nature this far, but guard against delay in the delivery of the placenta by following the uterus down with the hand upon the patient's abdomen, according to the expression and the method of the Dublin school, as the foetus is expelled, thus keeping the hand upon the uterus at least as a sentinel to warn of uterine

relaxation, and, better still, as a stimulus to, and a reinforcement of, uterine retraction. A general observance of this practice reduces to a minimum cases of post-partum hemorrhage, of delay in the discharge of the placenta, and of hour-glass contraction.

And now, coming to the practical point of more direct interference with the third stage of labor, what circumstances demand it, and how is it to be made?

I believe the teaching of the Philadelphia school has been favorable to early interference: at least such delay as shown by the Strasburg statistics would not have been allowed by her great teachers. Dr. Hodge advised moderate traction upon the cord at the end of half an hour or of an hour; and Dr. Meigs stated that he never waited for the spontaneous extrusion of the placenta more than an hour and a half, for he always supposed that if it would not take place in one hour there was little prospect for its taking place in twenty-four hours. Now, with all reverence for the names of these great men, and with, I trust, due personal humility, it seems to me their teaching was wrong. Even moderate traction upon the cord, if the placenta be attached, is liable to do harm, and traction is not necessary to find out whether it is detached. The statistics quoted prove that one cannot make a time-table for nature in regard of placental delivery: she may effect that delivery long after Dr. Meigs's hour has passed.

As long as the placenta is wholly attached, hemorrhage is impossible; the placenta is still a living structure, and one with the uterus; to tear it loose, to directly detach it from the uterus, opens the way for perilous hemorrhage. Not only this, but such artificial detachment is usually incomplete, is liable to injure the uterine tissue, and the operator's hand may be the bearer of septic germs, or these may pass in with the air admitted during the manipulation, and find a congenial soil for their development in fragments of placenta, or blood-clots that are retained in the uterus. Therefore, unless hemorrhage demands immediate interference, the obstetrician refrains from passing his hand into the uterine cavity for the removal of an attached placenta; a completely adherent placenta is not so dangerous as the intra-uterine use of the hand for its detachment. I believe, then, that armed expectation is wise in the latter case, only endeavoring, by suitable compression of the uterus with the hand acting through the abdominal wall, to determine or assist that retraction of the organ which is nature's method of separating the placenta. After the detachment of the placenta,—a fact which is best learned by feeling a part of the organ with the finger passed into the mouth of the womb,—we may, by friction and compression of the uterus, if needed, evoke uterine contractions which

will cause its expulsion. Those who believe that the placenta presents its foetal surface at the os uteri, urge the value of moderate and continuous traction upon the cord, thus assisting the moulding of the mass to the orifice through which it is to come. This conservative view as to the management of so-called retained placenta has been strongly presented by Siredey in his recent work upon puerperal diseases. The common expression, retention of the placenta, means very different conditions, each requiring its appropriate treatment.

Passing now to another topic, the relation of acute infectious diseases to the pregnant or to the puerperal state. The history of the three months furnishes two cases of measles in pregnancy, and one of scarlet fever in puerperality. A report of the latter will appear in the next number of the *American Journal of the Medical Sciences*, and therefore is not presented here. In both the cases of measles the eruption did not appear until after labor, but in each the interval was so short that the disease was present in pregnancy. In one case the disease had no evident effect upon pregnancy, and the puerperal period was normal. But in the other I believe premature labor was caused by the disease, for, though no accurate or definite information could be had from the mother as to when the pregnancy began,—she was half idiotic,—the child was small and feeble, imperfectly developed. Abortion or premature labor is the result in the majority of cases when measles occur in pregnancy. The second patient had septicæmia, but, even with this complication, and though quite ill, made a perfect recovery.

Puerperal temperature is a subject of importance, to which brief reference will now be made. I have here a temperature chart made by Drs. Phillips and Randall from the charts of twelve women in whom puerperal convalescence was undisturbed; the chart includes eight days of the puerperal period. The highest temperature was on the fifth day, and then it was only $98\frac{1}{4}^{\circ}$.

Temperature record from two daily averages of twelve cases of normal recovery from labor. The first temperature is that of a woman delivered within the preceding twenty-four hours:

Morning . .	98.4	98.4	98.2	98.2	98.2	98.4	98.0	98.2
Evening . .	98.8	98.8	98.8	98.4	98.9	98.8	98.4	98.4

There were opportunities for observing the influence of apparently trifling causes in producing marked elevations of temperature. Thus, one patient, whose condition was normal, insisted upon getting up the fifth day and dressing herself; she did so, notwithstanding the remonstrance of the nurse, and her temperature rose to a little above 100° . Either from feeling badly, or possibly from the moral influence of the thermometer, she was willing to return to her bed. Another

patient, doing well apparently, save that her temperature was 100° , got up the fourth day; her temperature rose to 103° ; she returned to bed; her temperature in a few hours was only 100° , and in two days was normal. In another case an irritant cathartic, or that which proved to be such, the bitartrate of potassium, was given the fifth day, and for a short time the patient's temperature was nearly 105° , but the next day it was normal. On the other hand, the gravity of a case may be much greater than the temperature indicates. Thus, in a patient with fatal septicæmia the temperature during the first five days only once rose as high as 101° , a part of the time was only 99° , on the sixth day rose to $102\frac{1}{2}^{\circ}$, on the seventh fell to 101° , and then on the morning of the eighth was $103\frac{1}{2}^{\circ}$; she died that day. In the abstract of a paper by Dr. Angus Macdonald (*British Medical Journal*, May 10), the statement is made that in some of the worst and most rapidly fatal cases of septicæmia the temperature never rose over 101° , if so high. The explanation given was that the vital centres were attacked with such a quantity of poison that death occurred before the tissue-changes ending in heat took place. Dr. Macdonald further referred to the important difference in the course of temperature in lymphatic and in phlebotic septicæmia, there being in the former a single rigor with sudden and continuous high temperature, and in the latter a series of successive rigors followed by corresponding depressions. Siredey had previously remarked that a temperature chart of a patient having puerperal septicæmia will readily show whether the disease is the lymphatic or the phlebotic form. When Oslander, at the beginning of the present century, and others since him, described remittent puerperal fever, doubtless they had under observation cases of phlebotic septicæmia. I am sure these sudden and marked declines of temperature have led practitioners into false diagnoses, especially since attention was redirected by two distinguished American physicians to the occurrence of malarial fever in child-bed: we would much rather believe a patient had this disorder than septicæmia, and such desire may assist the diagnostic error, an error I know that I have committed, and I have more than once witnessed its commission.*

The occurrence of a chill at the onset of septicæmia is by no means a constant phenomenon. While Dr. Macdonald refers to a chill marking the advent of lymphangitis, Siredey regards it as always present in phle-

* If any one should doubt the difficulty sometimes presented in diagnosing between septicæmia and malaria in child-bed, he may be referred to a lecture delivered by Prof. Luigi Mangiagalli upon malaria in its relation with the puerperal state, *Annali di Ostetricia, Ginecologia e Pediatria*, 1883. In this lecture Mangiagalli remarks that in the puerperium the diagnosis between septicæmia and malarial infection is not always easy,—that the difficulty may be most grave, almost insuperable.

bitis, usual but not invariable in lymphangitis; it is multiple in the former, single in the latter. The cases observed at the hospital show that a chill was not constant in septicæmia, even in a fatal form of the disease. While we may in some cases, by the great variations in temperature, be able to diagnosticate between septicæmic phlebitis and lymphangitis, there are decided oscillations in temperature observed in the latter, though much less than in the former; and, besides, some cases present the combined forms, lymphatics and veins alike affected. There is herewith presented the temperature chart of a patient who suffered with what I at the time believed to be lymphatic septicæmia, and yet the reading of the chart might justify the conclusion that the disease was phlebitic, though early in its manifestation.

Bertha Lambert, aged 25; puerperal septicæmia:

DATE.	PULSE.		DAY OF DISEASE.	TEMPERATURE.	
	Morning.	Evening.		Morning.	Evening.
5	...	88	1		99.0
6	64	84	2	98.5	98.7
7	64	112	3	98.6	103.0*
8	96	84	4	100.0	106.0†
9	100	85	5	100.0	100.5
10	102	114	6	101.7	101.4
11	96	110	7	99.8	100.8
12	100	100	8	102.4	102.4
13	96	96	9	102.8	101.8
14	98	102	10	98.6	100.5
15	80	96	11	97.7	99.4
16	84	98	12	99.4	99.8
17	84	85	13	98.0	99.0
18	88	77	14	97.8	98.7
19	74	72	15	98.0	98.2
20	80	86	16	99.6	100.0
21	73	78	17	100.0	100.4
22	72	85	18	98.4	99.0†
23	76	68	19	98.3	98.8
24	72	97	20	98.4	98.9
25	82	87	21	99.5	99.2

Looking at it, one sees that the temperature was normal until the morning of the third day, when the first chill occurred; at that time it rose to 103°; the next day a chill in the evening, and the mercury marked 106°, but fell the next morning to 100°; the next most marked difference was observed on the ninth and tenth days,—the evening of the former it was 101½°, the next morning 98½°. I show a second temperature chart of a patient whose temperature was under 100° until the fourth day; was 104½° the seventh day, dropping to 99½° the eighth day; reached 105° on the eleventh day, the twelfth only 101½°; and who had, in the course of her illness, at least two chills.

Kate Fleming, aged 22, puerperal septicæmia:

DATE.	PULSE.		DAY OF DISEASE.	TEMPERATURE.	
	Morning.	Evening.		Morning.	Evening.
10	88	88	2	98.0	98.0
11	90	92	3	98.9	98.0
12	82	84	4	98.2	99.6
13	108	104	5	100.6	102.2

* Chill at 3 P.M.

† Chill at 7 P.M. Pulse before chill; temperature afterwards.

‡ Child died of pneumonia.

DATE.	PULSE.		DAY OF DISEASE.	TEMPERATURE.	
	Morning.	Evening.		Morning.	Evening.
14	96	112	6	101.5	103.0
15	124	106	7	104.4	102.8
16	81	90	8	99.6	103.3
17	80	88	9	100.4	101.8
18	74	88	10	99.2	101.2
19	116	120	11	103.0	105.0
20	104	98	12	101.4	101.3
21	90	106	13	103.0	101.3
22	94	112	14	100.3	104.0
23	98	98	15	100.8	100.2
24	84	82	16	99.0	98.8
25	93	87	17	97.2	98.8
26	79	72	18	98.0	98.2
27	67	70	19	97.8	97.4
28	63	78	20	97.2	98.2
29	80	62	21	98.0	98.5
1	64	72	22	97.6	98.4
2	66	92	23	97.8	99.3
3	80	...	24	97.0	

The cases of septicæmia were too few, and the discrimination between lymphangitis and phlebitis not always made, to permit me to give a positive opinion; nevertheless, it seems to me probable that in lymphangitis the oscillations of temperature are always such that the thermometer marks a higher degree in the evening, while in phlebitis the highest temperature occurs quite as often in the morning as in the evening.

Returning to the subject of normal temperature in puerperality, it will be seen from the chart presented that the temperature of the third was no higher than that of the first or of the second day. In looking at a temperature chart given by Dr. Macdonald (Edinburgh Obstetrical Transactions, vol. vi.), taken as the result of observing the temperatures of thirty women, I find the highest temperatures the third, fourth, and seventh days; the thermometer registered 99½° the third day, and 99½° the fourth and seventh days.

Tarnier remarks that momentary elevations of temperature do not generally involve an unfavorable prognosis; but when they are progressive and continuous, especially when the thermometer placed in the axilla goes above 100¼°, some complication is to be feared.

One of the subjects delivered at the hospital had a slightly subnormal temperature. She was a girl, eighteen years of age, who, three hours after a normal labor, had a temperature of 99°; this fell so that on the third day it was only 98°, and so continued for a week. During a part of this time her pulse was 56, and even only 48.

The presence of albumen in the urine of the pregnant woman has often, even generally, engaged the attention of obstetricians; but comparatively little concern is usually shown as to its presence during labor, or in the puerperal state. Possibly it may be quite as important to examine the urine of the lying-in as of the pregnant woman, especially if she has had even slight septicæmia.

But, first, how frequent is albuminuria in pregnancy? In seventy-two pregnant women albuminuria was found in five. It will be observed that this proportion is very much less

than that given by Charpentier,* quoting Dumas, who, combining the statistics of several observers, makes the proportion one to five or six. It seems to me, both from hospital statistics and from observations in private practice, this proportion exaggerates the frequency of the accident.

By the albuminuria of labor is understood not only the disorder as occurring during labor, but also that of the two or three days immediately preceding. This is very much more frequent than the albuminuria of pregnancy; but the cases examined with reference to this point were too few to determine the proportion.

Seven of the seventy-two women had albuminuria after labor; I think the number was much greater, but some of the women suffering with septicæmia did not have the urine examined until after convalescence, and the results of examinations made in others were not properly kept, or at least were not placed in my hands.

In three of the seven mentioned the albuminuria was slight and transient. In four women convalescing from septicæmia, the urine was found to be albuminous one month after delivery. Two had pus, blood, and hyaline casts in the urine; in a third, no pus, but blood and casts were present in the urine; as to the urine of the fourth, the microscopic appearances were not noted. In regard to two of these patients, I know that the catheter was first used after their being brought from the "fever" to the "convalescent ward," and therefore the explanation which Olshausen has suggested of the renal disorder fails in these cases; catheterism had nothing to do with its causation. In explanation of these cases, it is probably better to accept the teaching of Siredey, who regards puerperal nephritis as a constant complication of uterine lymphangitis or phlebitis.

Women may apparently, but not really, recover after pregnancy and labor; especially if there has been septicæmia is there a liability of renal disorder becoming chronic, and it is only by actual examination of the urine that the integrity of the kidneys can be determined.

Mauriceau compares the pregnant woman just before labor to a ship that has been nine months tossing upon a rough sea, and urges the importance of not letting the ship sink as she enters the port of child-bed. It is not less the duty of the obstetrician to know that the ship has not suffered such damage on the ocean or in the port that she is unfit, without important repairs, to run the risk of another voyage.

Sugar in the urine of pregnant and of nursing women was first shown to occur by Blot in 1856. Differences of opinion hold as to the constancy of its presence in the conditions stated, as to its source and as to its character.

Macdonald found it in each of thirty-five cases whose urine was examined, and therefore regards it as present in all cases at some time or other of the puerperium. But neither Kleinwachter nor Spiegelberg refers to it as always present. In the examinations made daily of the urine of fifty women at the hospital (these examinations began a few days before, and continued seven days after, labor), four women had sugar in the urine before labor, and six after labor, one of the six being also one of the four. In this woman the sugar was constantly and largely present up to eight weeks after delivery; she had remarkably well developed mammary glands, and a most abundant secretion of milk. In this case Blot's suggested test for a good nurse—to wit, the quantity of sugar contained in the urine—would have proved true, so far as abundance of milk was concerned.

It has been shown that abrupt suppression of nursing causes the appearance of sugar in the urine: thus it is commonly observed in mammary abscess.

The fact that removal of the mammary glands in an inferior animal recently delivered causes disappearance of sugar from the urine, proves that it is incorrect to call the cases where sugar is found in the urine in pregnancy or child-bed, cases of glycosuria, but rather of lactosuria, unless we attach only the literal meaning to the first word in the compound glycosuria. Spiegelberg refers to the condition as an absorption diabetes; and this seems the opinion of most authorities. Tarnier, however, regards as very plausible the hypothesis that the sugar eliminated by the kidneys was sugar made very probably by the liver in view of the lacteal secretion, and which was not utilized in consequence of the momentary suppression of this function; further, he thinks new researches necessary, in addition to those of Hofmeister and others, to determine the question as to whether this sugar is glucose or lactose.

Whenever there is an exact correspondence between the milk-supply and the demand, the former not being in excess of the latter, it is probable sugar will not be found in the urine; I think, therefore, that the experience of Macdonald—showing saccharine urine in all cases of lying-in-women—is not the law.

An interesting case of secondary puerperal hemorrhage occurred, interesting as to its etiology, and instructive as to the means by which it was finally arrested.

The following is the history as given by Dr. Voorhees, the *interne* who had charge of the patient:

A. A., German, single, primipara; varicose condition of veins of lower limbs, this condition disappearing after labor. Labor at full term, March 5, 1884, lasting a little over twelve hours. Her condition was perfectly satisfactory up to the evening of the eleventh day after confinement; on that day she was trans-

* *Traité des Accouchements.*

ferred to the convalescent ward, and then saw the out-door agent as to keeping the father of her child in prison for refusing support. She was greatly distressed by this interview, and at 4.30 the next morning hemorrhage began. Digital examination showed that the blood came from the uterus; the os was high up, flabby, and full of clots; the uterus was as large as if delivery had just occurred, and was soft and relaxed. Ergot was given, the child applied to the breast, the uterus was emptied of its clots, and friction used to stimulate contraction, but the bleeding still continued. Ice was then used to the abdomen and in the vagina; the bleeding was not stopped. Hot water was then freely thrown into the uterus, and the result was prompt and satisfactory. The patient made a good recovery. Although the uterine discharges were carefully examined, at no time was there any organized material found, nothing in the least indicating that this hemorrhage was caused, for example, by the retention of a placental fragment.

Those who have read Dr. Fordyce Barker's admirable lectures upon puerperal diseases will remember the graphic description of a case of secondary hemorrhage the second day of lying-in, caused by an emotional cause, and in what perilous condition the poor woman was for some days. So, too, in the hospital case we have an example of hemorrhage from a psychical cause. Believe or doubt as we may, say what we will, there are at times in medical practice just such sudden, startling, and strong proclamations of something more than flesh and blood in this human nature, telling us that the coarse material may be prostrated through the finer spiritual, the psychical assert its power over the physical.

Further, as to this case, the great value of hot-water injections for the arrest of uterine hemorrhage never had a more striking illustration.

The final subject presented to you is that of uterine rupture. In reflecting upon the history of my three months' service, no event occurred in my duties to these unfortunate women—women often worthy of the profoundest pity as the victims of misfortune and of man's perfidy—which causes me greater sorrow, in silence or in recital, than a case where the uterus was ruptured in consequence of a shoulder presentation, a case which ended in death the eighth day after delivery. Yet I would fail in duty to my profession, that has been so good, so generous to me, if I did not make the case fully known. The patient was a well-formed, healthy multipara; she had been in labor nearly twelve hours when I first saw her, the left shoulder presenting. Ether was immediately given until she was thoroughly under its anæsthetic effect; and then, without violence, nay, with great ease, I passed two fingers behind the right knee, brought the

foot down, and turning and delivery were effected in a few minutes; the placenta followed almost immediately; the child, quite a large one, was dead. The patient came out from the anæsthesia satisfactorily; her pulse was good; there was no complaint, no shock, no great hemorrhage. Yet that woman had a ruptured womb, the tear beginning at the os uteri on the right side, involving the cervix and the lower part of the body of the uterus, this condition being made known by the post-mortem. If it be thought I ought to have known this accident at the time of delivery, I can only say that like ignorance happened to Dubois, to Hervieux, to Tarnier, and others,—the first revelation of the uterine rent being made at the post-mortem. These silent tears of the womb are, as Hervieux has suggested, probably more frequent than generally thought. No, my self-reproach is not in this, but in not having made, myself or by another, an examination during pregnancy, so that the abnormal presentation could have been corrected, if not then, at least early in labor. But let this pass. The great practical lesson to be drawn from the accident is not only the importance of an early rectification of a mal-presentation, but also an appreciation of the danger of rupture of the uterus and how this accident occurs. The drawing now shown gives the position occupied by the child, and also and especially gives the change in form and thickness of the two cavities of the uterus, which, as so admirably described by Bandl, are formed when nature is unable to overcome the obstacle to labor found in such case. The one cavity is formed by the body of the uterus, and its walls become thicker and stronger; the other, by the cervix, and its walls grow thinner,—become, indeed, so attenuated and weak that a very slight additional strain causes a tear at some point; that strain may come from a uterine contraction, or solely from the introduction of the finger; and thus peril from action, peril from delay, must be before the obstetrician's mind when called to a case of neglected shoulder presentation.

Of course, had I seen this patient an hour or two earlier the event might have been different. The pressure of the presenting part had been so severe that a slough of the vesico-vaginal wall occurred, and the patient, had she recovered, would have required an operation for the resulting urinary fistula. I have thought that possibly the uterine rent was in part the result of a slough also; but, be this as it may, there was not the slightest indication given at the post-mortem that any hemorrhage in the abdominal cavity had taken place.

One other topic I had designed presenting,—the prophylactic treatment of puerperal septicæmia; but my paper has already occupied enough, possibly too much, of your time.

REVIEWS AND BOOK NOTICES.

THE EXTRA PHARMACOPŒIA OF UNOFFICIAL DRUGS AND CHEMICAL AND PHARMACEUTICAL PREPARATIONS. By WILLIAM MARTINDALE, F.C.S., etc. With References to their Use, abstracted from the Medical Journals, and a Therapeutic Index of Diseases and Symptoms, by W. WYNN WESTCOTT, M.B. London. Second Edition. London, H. K. Lewis, 1884. Morocco, small 8vo, pp. 330.

On account of the delay in the publication of a new edition of the British Pharmacopœia, it has happened that a large number of drugs which have occupied the attention of therapeutists and clinicians are only to be found in the medical journals and original sources. Many of the remedies introduced within the last fifteen years have come into common use by the profession, and the *raison d'être* in England of such a work as the one before us is very evident; and, although the United States Pharmacopœia has been recently issued, there will be found by physicians on this side of the Atlantic in its pages much interesting and useful information with regard to new remedies not official as yet in any pharmacopœia.

The book is almost entirely devoted to a consideration of new drugs and remedies, arranged alphabetically, with their preparations, and brief suggestions as to their therapeutic employment, with references to original sources in recent text-books and journals. There are also a posological table and a good therapeutic index of diseases, which form an appendix to the body of the work.

As evidence of the usefulness of this work, it may be stated that the first edition was exhausted in a few weeks. An examination of its pages will be sufficient to show that its popularity is merited. Although small in size, we have found it a valuable work of reference.

MANUAL OF GENERAL MEDICINAL TECHNOLOGY. By EDWARD CURTIS, A.M., M.D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Medical Department of Columbia College in the City of New York. New York, William Wood & Co., 1883. Cloth, 16mo, pp. 234.

This little work comprises the lectures of the author upon medical technology, and especially prescription-writing, from his course on Materia Medica and Therapeutics. It is divided into two parts. Part I., The Technology of Medicines, consists of the Authority for Medicines, the Naming of Medicines, the Forms of Medicines, the Determining of the Quantities of Medicines, and the Prescribing of Medicines. Part II., or the Technol-

ogy of Medicating, contains a discussion of the Modes of Medicating and Dosage. The work is arranged in lecture-form, and presents in agreeable style and in a condensed form much information upon subjects that physicians are too often deficient in. The terminology of the last edition of the Pharmacopœia is followed. The instructions and suggestions as to prescription-writing are supplemented by a table of the genitives of Latin nouns for use in prescribing. An exposition of the metric method is also to be found in this little work, which is superior to most hand-books in design and execution.

ARZNEIVERORDNUNGEN DER TÜBINGER KLINISCHEN ANSTALTEN; etc.

[Pharmacopœia of the Tübingen Clinic. The Physical Properties, Physiological Action, Application, Dosage, and Formulæ of the Remedies used in the Clinical Institute of the University of Tübingen. Published by FR. KELLER, M.D., First Assistant Physician in the Poliklinik of the University at Tübingen. Tübingen, Franz Fues, 1883. 8vo, cloth, pp. 161, interleaved. Price, 4 marks.]

In this little work, arranged alphabetically, there are considered a large number of official and unofficial (Ph. Germ.) drugs, with the modes of combination which have been found most useful at the Tübingen School. The titles are in Latin, followed by the German synonymes. A description of the physical and chemical characters is then briefly given, to which is appended the physiological action or medical application, with prescriptions and dosage. At the end of the volume is a list of the legal prices for drugs, and a table of maximum doses of poisons. The material of this work is well digested, and it contains much that is of value in small compass. For German readers and those who intend studying in Germany this book will prove both convenient and useful.

QUARANTINE AND SANITARY OPERATIONS OF THE BOARD OF HEALTH OF THE STATE OF LOUISIANA DURING 1880, 1881, 1882, AND 1883. By JOSEPH JONES, M.D., President of the State Board of Health of Louisiana. Introduction to the Annual Report of the Board of Health to the General Assembly of the State of Louisiana, 1883-84. Baton Rouge, 1884. Pp. 393.

The greater part of this valuable report is devoted to the measures for the prevention and arrest of endemic, epidemic, contagious, and infectious diseases, those which engaged the most attention of the health authorities being smallpox and yellow fever. A sketch of the history of quarantine in Louisiana is among the valuable papers contributed by Dr. Jones.

The labors of the Board of Health of the State of Louisiana during the years named

have apparently demonstrated the truth of the following propositions:

1. Yellow fever is not indigenous to New Orleans, Louisiana, or the Mississippi Valley.

2. Yellow fever can be excluded from New Orleans and the Mississippi Valley by a rigid and effective quarantine.

3. Quarantine to be effective must embrace not merely inspection and detention, but discharge of infected cargoes, thorough ventilation, and fumigation.

The report of Dr. Jones upon smallpox is not only a model of brevity, but also a conclusive defence, if any were needed, of the value of prompt disinfection, isolation, and vaccination in preventing an outbreak of smallpox. Its lessons might well be studied by health boards nearer home.

STUDENT'S MANUAL OF ELECTRO-THERAPEUTICS. Embodying Lectures delivered in the Course on Therapeutics at the Women's Medical College of the New York Infirmary. By R. W. AMIDON, A.M., M.D. G. P. Putnam's Sons, New York, 1884. 12mo, pp. 93, cloth.

This handsomely-printed manual is intended to give in plain language, divested as much as possible of technicalities and mysticism, as much of the subject of electro-physiology as is necessary to the proper understanding of the construction and use of medical batteries, to point out the commoner gross physiological effects of electricity, to outline the methods of electro-diagnosis, and to determine the proper kind of electricity and its mode of application in different morbid states. The manual is illustrated, and is carefully and clearly written, and it is not burdened by reports of wonderful cures obtained in the practice of the author, which usually form the greater portion of the bulky treatises upon this subject. We think this manual a good introduction to the more systematic works on the subject.

MEDICAL GERMAN. A Manual designed to aid Physicians in their Interchange with German Patients and in reading Medical Works and Publications in the German Language. By SOLOMON DEUTSCH, A.M., Ph.D. New York, J. H. Vail & Co., 1884. 12mo, pp. 346. Cloth, \$2.25.

The manual, whose scope is well set forth in its title, is a welcome addition to the reference-library of those who are not thoroughly familiar with German. The text is divided into a vocabulary arranged under different subjects, anatomical, nosological, and therapeutical (including appliances of surgery, articles of diet, clothing, furniture, etc.). The second division consists of clinical conversations of a highly useful character, and the German and English indexes, containing about fourteen thousand words.

Great care and accuracy have been called into service in preparing these lists and conversations, but occasionally there is a want of uniformity that might be confusing to a beginner. *Unwohl* is translated on page 158 as "uncomfortable" and in the very next line is rendered "ill"; at the bottom of the page *Ja, sehr*, is given as the equivalent of "Yes, I perspired profusely." *Übelkeit* (*uebelkeit*?) would be expressed better by its synonyme "nausea" than by "rising of the stomach," which might be due to pregnancy. *Die weibliche Brust* would be better translated by "the female breast," or "mammary gland," than by the "teat," which is elsewhere given correctly as the equivalent of *Brustwarze*. The verb *schnaufen*, to "breathe strongly," is a useful one in physical examination of the chest, and might be introduced in a subsequent edition,—which will undoubtedly be called for, since the work is one which only needs examination to demonstrate its usefulness and value. F. W.

GLEANINGS FROM EXCHANGES.

SEA-WEED, AND ITS ECONOMIC APPLICATIONS.—Mr. Ed. C. C. Stanford recently read before the Society of Arts, London, a paper on the constituents of sea-weed, *Laminaria stenophylla*, and their practical applications.

The glairy, colorless juice of the plant contains calcium, magnesium, and sodium, in combination with a new acid, called by the author *alginic acid*. This new substance is so abundant in the plant that, on maceration for twenty-four hours in sodium carbonate in the cold, the plant is completely disintegrated; the resulting viscid mass consists mainly of cellulose and sodium alginate, the latter being separated by filtration through linen; the acid may now be separated by precipitation upon the addition of hydrochloric or sulphuric acid. The flocculent precipitate may then be collected and pressed into a cake like cheese, and can be kept for any length of time in ordinary cool drying-rooms. The algin can be sent out in this state, or can be dissolved in some alkali, preferably the bicarbonates, to form the corresponding alginate. The sodium alginate forms a thick-solution at two per cent. Its viscosity is extraordinary, being fourteen times as great as that of starch, and thirty-seven times that of gum arabic, thus making it of especial value in the arts and manufacturing, as substitutes for those substances for sizing fabrics, for pharmaceutical purposes (emulsions, troches, capsules, etc.). It may also be used to prevent or dissolve boiler-incrustations, and also for boiler-covering. As an article of food (the chemical composition of algin being carbon 44.39, hydrogen 5.47, nitro-

gen 3.77, oxygen 46.37) it might be adaptable, as it contains about as much nitrogen as Dutch cheese, and would probably be a useful addition as a thickening to soups or puddings, or as a basis for preserved fruits and jams in place of apple-jelly, which is a common ingredient in their manufacture on a large scale. The principal use of the new substance will probably be as a mordant, the demand for which is enormous. The supply of raw material is practically unlimited, and the author recommends that it should be imported in the raw state. The above manipulation does not interfere with the extraction of iodine and bromine from the watery solution: thus, by extracting the algin and cellulose the entire plant is utilized.—*American Druggist*, August, 1884.

THE ACTION OF BACTERIA ON STARCH.—In a communication by J. Wortmann (*Journal of the Chemical Society*) are detailed the results of some experiments made upon the influence of bacteria upon starch, which are of some interest from a medical stand-point as possibly throwing some light upon the mode of action of so-called pathological bacteria. In his work, "Ueber die niederen Pilze," Naegeli referred to the secretion by these low organisms of a special ferment capable of changing milk-sugar into fermentescible sugar, and starch and cellulose into glucose, and of dissolving coagulated albumen and other albuminates; and Sachse also alludes to the circumstance of starch solution undergoing no change so long as it is protected from the influence of organic germs, by which, otherwise, it quickly undergoes transformation. The following are Mr. Wortmann's conclusions:

1. Bacteria are capable of acting on starch, whether in the solid state, as paste, or in solution, in a manner analogous to diastase.
 2. As in the case of diastase, different kinds of starch are attacked by bacteria with different degrees of rapidity.
 3. The action of bacteria on starch is manifested only in the absence of other sources of carbon nutriment, and when access of air is not prevented.
 4. The action of bacteria on starch is affected by a ferment secreted by them, and which, like diastase, is soluble in water, but precipitable by alcohol.
 5. This ferment acts precisely as diastase in changing starch into a sugar capable of reducing cupric oxide, but is not possessed of peptonizing properties.
 6. The ferment itself is also capable of acting on starch in the absence of oxygen.
 7. The ferment is secreted by the bacteria also in neutral solution of starch, and exerts its influence under these conditions.
 8. This influence is expedited in slightly acid solutions.
- The author concludes his paper with speculations as to the conditions under which

bacteria are capable of generating this amyolytic (diastatic) ferment, instead of the ordinary peptonizing one.—*American Druggist*.

MICROCOCCLUS XANTHOGENICUS.—Recent experiments made by Messrs. Mozly and Harrison have served to throw discredit on the conclusions of Dr. Freire. Investigations were made with soil taken from the graves of persons who died of yellow fever in the epidemic of 1881, and also with material from the graves of those dead of other diseases, as well as from open fields on which no manure had been used. Previously sterilized chicken-soup impregnated with any of these moulds and kept at the ordinary temperature usually became turbid in a few hours, and by the second day assumed a bright-yellow color, especially on the surface, the color being most evident in the case of a soil from a yellow-fever grave and one from an open field. These appearances were not met with when the soil used had been taken from yellow-fever graves where a layer of lime had been placed above the coffin. The colored liquids, although swarming with bacteria, were injected into guinea-pigs without producing any symptoms as a rule, and certainly none which could be referred to yellow fever. Similar negative results were obtained when decomposing matter was used from the coffin of a person who had died of the disease, the guinea-pigs in such cases apparently dying of simple septicæmia, no bacteria being detected in the blood, the corpuscles of which were considerably disintegrated, and there was no albuminuria. When the "moulds" were cultivated at 98.5° F., the liquid acted much more virulently; but the symptoms were still those of blood-poisoning, and not of yellow fever, the absence of micro-organisms in the bodies examined immediately after death being certified.—*Lancet*.

MISCELLANY.

AMERICAN PUBLIC HEALTH ASSOCIATION.—The twelfth annual session of the Association will be held on Tuesday, Wednesday, Thursday, and Friday, October 14–17, 1884, at St. Louis, Missouri. The following topics will be presented for consideration:

1. Hygiene of the Habitations of the Poor.
2. Hygiene of Occupations.
3. School Hygiene.
4. Adulteration of Food.
5. Water-Pollution.
6. Disposal of Sewage by Irrigation or Chemical Action.
7. The Observable Effect upon the Public Health of Official Sanitary Supervision.
8. The Work of Municipal and State Boards of Health.

Persons intending to present papers on any

of these subjects are requested to notify the Secretary at once, and to furnish him with a condensed abstract of the same not later than September 1. Members desiring to participate in the discussion of these papers are also requested to inform the Secretary.

It is requested that the complete papers shall be in the hands of the Secretary at least three days prior to the meeting, as all papers must be examined by a committee before being read. They may be sent by mail or express to the Secretary at his office prior to the 1st of October, after which date to his address at St. Louis, Missouri, care of Dr. Joseph Spiegelhalter.

Active and associate members have equal rights and privileges in the presentation and discussion of papers.

Extensive preparations are now under way for making this the largest meeting that the Association has ever held, and the committee urge the attendance and co-operation of persons in all trades and professions interested in the advancement of public health and general sanitary science.

A circular giving full and concise information regarding local matters, programme, transportation, etc., will be issued in due season before the meeting.

All inquiries of a local character should be addressed to Dr. Joseph Spiegelhalter, Chairman of Committee of Arrangements, St. Louis, Missouri.

The officers of the Association are—President, Dr. Albert L. Gihon, U.S. Navy, Washington, D.C.; First Vice-President, Dr. James E. Reeves, Wheeling, West Virginia; Second Vice-President, Honorable Erastus Brooks, Richmond, New York; Secretary, Dr. Irving A. Watson, Concord, New Hampshire; Treasurer, Dr. J. Berrien Lindsley, Nashville, Tennessee.

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.—Anticipating a fuller account of the proceedings by mail, we will merely notice that, in spite of the cholera, and the proposition to adjourn the Congress until next year on account of the epidemic in France, the session was opened on August 10, according to programme, and was largely attended. Prof. Panum, chairman of the Organizing Committee, delivered, in the French language, a brief but cordial address of welcome, and was followed by Sir James Paget, Virchow, and Pasteur. In the various Sections the regular exercises were also opened by addresses by the respective presiding officers. In effecting a permanent organization, Prof. P. L. Panum, of Copenhagen, was elected President, and Prof. C. Lange Secretary-General. Among the honorary presidents representing different countries were Dr. John S. Billings, U.S.A., and Prof. Austin Flint, of New York.

Prof. Louis Pasteur delivered an address on

“Preventive Inoculation for Hydrophobia,” in which he referred to the favorable report upon the subject by the Commission appointed to superintend a series of experiments by the French government, stating that twenty-three dogs which had been subjected to inoculation had been bitten by rabid animals in June, and yet all remain healthy; of nineteen unprotected animals similarly bitten, fifteen went mad. In closing, he stated that hydrophobia might be exterminated if all dogs could be similarly treated.

Prof. Tommaso Crudeli, of Rome, gave an account, at the general meeting on the second day, of the natural production of malaria, and the means for making malarial countries more healthy.

The entertainments provided afford abundant opportunity for acquaintance and social intercourse among the members: the members of the Sections are entertained at lunch daily by the chairmen of the Sections, and a dinner was given by Prof. Panum to a large number of the guests; an excursion upon the Sound was given, and the fourth day was devoted to an excursion to Elsinore. The invitation which was sent by the American Medical Association to hold the next session of the International Medical Congress in Washington, U.S., was favorably received, and, it is hoped, will be accepted.

As an instance of enterprise in American medical journalism, we are proud to notice that two medical journals—the *Medical Record*, of New York, and the *Medical News*, of Philadelphia—published cable despatches from Copenhagen, to which we are indebted for our early information of the successful inauguration of the Eighth Annual Session of the Congress.

POISONOUS SOLDER IN CANNED GOODS.—Dr. John G. Johnson, having had six cases of poisoning from the eating of canned tomatoes, read an excellent paper on the subject before the New York Medico-Legal Society, which is published in the *Sanitarian* for June. He concludes, after a careful review of the subject, that—

1. These were not cases of sickness from spoiled tomatoes.
2. They were cases of corrosive poisoning from muriate of zinc and muriate of tin.
3. This poisonous amalgam must be abandoned.
4. Exemplary damages, “at the discretion of the jury,” will be sustained by the courts for this reckless tampering with human life in using a dangerous means when a safe one could be used.
5. The canners have only themselves to thank for the present panic in their business, for they have persisted in the use of this dangerous amalgam, knowing it was dangerous.
6. Every cap should be examined, and, if two holes are found in it, send it at once to

the health board, with the contents and the name of the grocer who sold it.

7. Reject every article of canned food that does not show the line of resin around the edge of the solder on the cap the same as is seen on the seam at the side of the can.

8. "Standard" or first-class goods have not only the name of the factory, but also that of the wholesale house which sells them, on the label. "Seconds," or doubtful or "re-processed" goods, have a "stock-label" of some mythical canning-house, but do not have the name of any wholesale grocer on them. Reject all goods that do not have the name of the factory and also the name of some wholesale firm on the label.

9. A "swell" or decomposing can of goods can always be detected by pressing in the bottom of the can. A sound can, pressed, will give a solid feel. When gas from the decomposition of the food is inside the can, the tin will rattle by pressing up the bottom as you displace the gas in the can.

10. Reject every can that shows any rust around the cap on the inside of the head of the can. If housewives are educated to these points, then muriate-of-zinc amalgam will become a thing of the past, and dealers in "swells" have to seek some other occupation.

THE UNITED STATES MEDICAL COLLEGE, which has been doing a flourishing business in New York in the way of grinding out medical graduates, has had a quietus put upon it by the Court of Appeals in that State, a decision having been recently made declaring that the institution was never properly incorporated and had no right to issue diplomas. This decision is the result of a vigorous warfare waged on the college by the New York County Medical Society. What the result will be on the action of the college remains to be seen, but it is not unlikely that it will try to secure through the Legislature what has been denied it in the courts. An institution which turns out incompetent men to fill the ranks of the profession does not deserve any favors from the law-makers, and we trust it will not receive any.

A TRANSLATION into Russian of the sixth edition of Da Costa's work on Medical Diagnosis, recently issued at St. Petersburg, has just been received. The translators have apparently accomplished the work satisfactorily, and made some additions in the form of notes: the result is a handsome octavo volume of six hundred and seventy-two pages. This is a rare honor to an American medical book.

ATTEMPTED SUICIDE A FELONY IN PENNSYLVANIA.—In the case of a prisoner who recently attempted suicide by hanging in his cell, there being no statutory provision upon the subject in the laws of Pennsylvania, Judge Arnold decided that he could be held for trial for felony under common law.

NOTES AND QUERIES.

OBITUARY NOTICE.

JOSEPH JANVIER WOODWARD, M.D.—The death of Dr. Woodward, on the 18th instant, is an event for which his failing health for several years had prepared his friends, but the entire profession, of whom he was so eminent a member, will receive the announcement of his death with sorrow. He died at a sanitarium near Philadelphia, from some obscure disease of the nervous system.

Dr. Woodward was born in Philadelphia in 1833, and was graduated with honor from the high school in 1850, and in 1853 he received the degree of M.D. from the University of Pennsylvania. He then entered the army, where he distinguished himself in the Surgeon-General's office by his achievements with microscopic photography. He was the medical editor of the "Medical and Surgical History of the Rebellion," and was a valued contributor to medical journals. He was a member of a number of medical societies, and was elected President of the American Medical Association in 1881, although he was prevented by illness from attending the session.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 3, 1884, TO AUGUST 16, 1884.

GIBSON, J. R., MAJOR AND SURGEON.—Granted leave of absence for one month and fifteen days. S. O. 36, Headquarters Division of the Atlantic, August 4, 1884.

BARTHOLF, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Vancouver Barracks, Washington Territory, and ordered to take station at Portland, Oregon. Paragraph 1, S. O. 114, Headquarters Department of the Columbia, August 1, 1884.

HEIZMANN, C. L., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Columbus Barracks, Ohio, and ordered for duty in Department of the East. Paragraph 2, S. O. 180, A. G. O., August 2, 1884.

HEIZMANN, C. L., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to proceed to Fort Ontario, New York, and report for duty. Paragraph 3, S. O. 163, Headquarters Department of the East, August 13, 1884.

KANE, JOHN J., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. Paragraph 1, S. O. 160, Headquarters Department of the East, August 10, 1884.

MCCREERY, GEORGE, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended two months. Paragraph 4, S. O. 180, A. G. O., August 2, 1884.

HOPKINS, W. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave of absence, with permission to apply for one month's extension. Paragraph 1, S. O. 67, Headquarters Department of Arizona, August 1, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM AUGUST 3, 1884, TO AUGUST 16, 1884.

Assistant-Surgeon J. S. SAYRE, ordered to U.S. steam-ship "Independence."

Medical Inspector E. BOGERT, to be fleet-surgeon, Asiatic Squadron.

Surgeon H. J. BABIN, detached from "Minnesota," ordered to Marine Rendezvous, New York.

P. A. Surgeon R. WHITING, detached from Marine Rendezvous, New York, ordered to Naval Academy as member of Examining Board.

Surgeon G. H. COOKE, ordered to Naval Academy as member of Examining Board.

P. A. Surgeon P. M. RIXEY, detached from special duty at Washington, ordered to U.S. steam-ship "Lancaster."

Surgeon T. WOOLVERTON, ordered to U.S. steam-ship "Minnesota."

PHILADELPHIA, SEPTEMBER 6, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE DISEASES OF WOMEN.

BY JAMES B. HUNTER, M.D.,

Surgeon to the Woman's Hospital, and Professor of Gynecology in the New York Polyclinic.

(Reported for the *Philadelphia Medical Times*.)

OPERATION FOR SUPPURATING CYST.

GENTLEMEN,—The case of ovariectomy which you saw at the Woman's Hospital last Thursday afternoon was in some respects a peculiar one. The patient, aged 18 and unmarried, had entered the hospital, February 27, with what seemed to be a simple fibroid tumor of the uterus, as nothing further than a small hard mass could be felt, and the patient had suffered from metrorrhagia. The tumor grew rapidly, and she had vomiting and pain, with a temperature of from 102° to 104° , in spite of the constant use of the cold coil and large doses of quinine. There was evidently septic poisoning, and the tumor began to manifest slight fluctuation, as if it consisted of a very tense and thick cyst. I made up my mind that such was its nature, and that there was inflammation and suppuration going on within its walls. Dr. Emmet saw the patient on Tuesday afternoon, and agreed in the diagnosis, and thought that an operation should be done immediately. Dr. Thomas saw her on Wednesday, and said that an operation was imperatively called for. I performed the operation on Thursday, and when I punctured the cyst a quantity of horribly fetid pus escaped. The cyst was closely attached to the omentum, the intestines, and the walls of the pelvis, and almost completely surrounded the uterus. I therefore made no prolonged attempt to remove the cyst, but washed it out thoroughly with Davidson's syringe until the water returned perfectly clear, and closed the wound after a manner which has often given good results,—that is to say, I lifted the edges of the wound in the cyst up into the abdominal wound, and passed sutures through the abdominal wound and the cyst-walls, leaving only an opening sufficiently large

to admit of the introduction of a double drainage-tube into the cyst-cavity, through which it could be irrigated with an antiseptic solution. Last week I saw a patient whose tumor I treated in this manner a year ago, and who is now in perfectly good condition. She recovered somewhat slowly. In that case the wound was closed in the manner just mentioned, the cyst-walls being included in the abdominal wound by means of sutures passed through both; a Thomas double hard-rubber drainage-tube was introduced, the water passing in by one tube and returning by the other, whereby the sac could be kept constantly clean with carbolized or other disinfectant solution, without any disturbance of the dressings. The cyst-cavity gradually filled up until there remained only a small sinus, into which a probe could be passed, and discharging two or three drops of watery fluid daily. The patient experiences no discomfort, and is now so well that she is about to get married. She also was a girl of 18. I removed but one ovary, with the cyst.

To return to the other case. I treated that patient in the same manner. I put in the drainage-tube, and closed the aperture around it perfectly, but she had lost a great deal of strength during the past two weeks, and before she entered the hospital she had high fever, the pulse was tense and rapid, and, although she rallied well from the ether, she died ten hours after the operation, I suppose from septicæmia. Had the condition been diagnosed with certainty three weeks before, and operated upon, it is possible the patient might have been saved; but under the circumstances it was impossible to make a positive diagnosis early enough. One gentleman, who saw the patient two weeks ago, when she had a high temperature, suggested tapping to see whether or not there was fluid; but had that been done, even with the finest instrument, the contents of the cyst, composed of fetid pus, must have escaped into the peritoneal cavity, for when I put the needle into the cyst, after making the abdominal incision, a stream spurted forth a distance of two or three feet from the patient, so tense was the tumor. Had the patient been let alone, doubtless rupture of the cyst would probably have occurred within four or five days, if death from septicæmia had not occurred in less time.

CELLULITIS.

This patient is 38 years old, has been married sixteen years, and has had four children and one miscarriage. The miscarriage occurred eight years ago, and the last child was born six years ago. She menstruates regularly. She suffers from pain in the back on the slightest exertion, especially after stooping or leaning forward. The pain is a "bearing-down" one, as she calls it.

We have seen this patient before, and made a diagnosis of cellulitis, and determined that it is one of those cases in which not much can be done except to make occasional applications of iodine, and to advise the patient as far as possible to avoid such exercise as causes pain, as stooping or lifting. Under these directions the patient finds herself in a much less sensitive state than when she was here on a previous occasion. If she could take care of herself she could be improved very much under a little careful treatment, and she could be damaged very much with a little careless treatment. There is some falling of the uterus. We will paint the strong tincture of iodine around the cervix, and thus tend to hasten absorption. It is a great point in these cases to know when not to do anything. Such a condition as is present here always contraindicates an operation for laceration of the cervix, but not necessarily for laceration of the perineum. If this patient could be in a hospital for a few weeks, it would be well to apply iodine to and around the cervix, and then pack the vagina with cotton and glycerin. This would give an elastic support to the uterus, and save her some of the pain which she feels on standing, when there is a tendency for the uterus to prolapse. A little of the iodide of potassium, five grains two or three times a day, is of benefit in some of these cases. Some cases get along very well without any treatment, and others with all the treatment which is proper linger a long time without much improvement. The one thing most needful of all is rest, and for women of this class it is very seldom of any use to order it, as they cannot escape their household work. It is practicable, however, to give some attention to their general health, to regulate the bowels, to advise warm clothing and the protection of the abdominal organs by a flannel bandage constantly worn. The

disease is especially prone to recur after any exposure or imprudence.

RETROVERSION WITH CONGESTION.

This woman is unmarried, 21 years old, and for three months past has menstruated every two weeks, the flow continuing four or five days at a time. We have seen this patient before, and found the uterus out of place. She has menorrhagia, consequent upon congestion due to displacement. She had been in perfect health until, during one of her menstrual periods, by some strain or fall, the uterus was thrown backward. Sometimes a fall backward will cause such a displacement of the womb, and the organ, remaining misplaced, will become congested from interference with its normal circulation.

If the uterus has not been retroverted very long, it can be thoroughly replaced, if the patient be otherwise in good health, and will sometimes remain in position. It is better to try a light tampon before resorting to the use of the pessary. Still, unless the case be very recent, it is rather the exception to find the uterus remain in its normal position after being replaced. This patient says that since she was here before, the bearing-down pain from which she had suffered had disappeared, and also the leucorrhœa. She has not yet passed a menstrual period since the displacement was reduced. Should the uterus not fall when it becomes congested at the monthly periods, and when she stands and walks, we may feel confident that it will remain reduced without the introduction of a pessary. It is better, however, that the patient retain the recumbent posture, on the bed or sofa, during the period. She states that she has been relieved of obstinate constipation since she came here for treatment. She had been in the habit of taking cathartics to effect a movement from the bowel. The constipation was due to pressure of the displaced uterus upon the rectum behind, interfering with its normal functions. All this was relieved as soon as the uterus was thrown forward. In this case it was impossible to replace the uterus without the aid of the sound, which I consider justifiable if used very carefully. It is always better to do without it, if possible; but it is useless simply to raise the uterus a little and allow it to drop back when the finger is withdrawn. In some cases the uterus will fall into place

with very slight pressure if the woman is placed on the chest and knees and the vagina dilated with Sims's speculum. Beware of attempting too much at one time, and always insist on rest in the recumbent posture, on the side, for some hours afterwards, as soon as the patient reaches her home.

RETROVERSION WITH PROLAPSUS.

This patient is 35 years old, has been married fourteen years, and has had four children, the last child being seven years old. For thirteen years she has complained of pain in the back and abdomen.

This is a patient whom we have not seen before. You will notice on inspection that there is a slight retrocele and vesicocele. I have here another bivalve speculum with which to make the examination. It differs from others of its kind only in the mechanism for opening and approximating the blades. It is the invention of Dr. Reid, of Edinburgh, and possesses no special advantages over many other similar instruments.

Before passing the sound it is best first to employ a small probe, which will adapt itself easily to the canal of the uterus, and not compel the uterus, as the sound may, to mould itself to the form of the instrument. It would be proper here to attempt reduction of the displacement by introducing the large sound, and using a little force to lift the uterus upward and forward, if the patient did not expect her period in a day or two. The sound should not generally be introduced for the replacement of the organ for two days before or after a period. At present we will only raise the uterus as far as can be conveniently done with the finger while the patient is in Sims's position, and place a ball of cotton behind it. Later we will put the uterus well forward, by means of the sound, if it cannot be done without, and retain it there with a pessary. It is evident that it is easier to keep the wound in position when the displacement is fully reduced by carrying the body beyond the perpendicular, than when it is only reduced sufficiently to just balance itself, when it is liable on the least provocation to fall backward by force of gravity.

In the case of a patient in the hospital a few weeks ago, I threw the uterus well forward, slightly freshened the surfaces on the posterior wall of the cervix and on the

vagina, and united the two pared surfaces with silver wire. The band thus formed has been sufficient to hold the uterus forward thus far. The patient is an unmarried woman, the vagina is relaxed, the uterus fell back when reduced, and the patient was one of those sensitive persons who have a particular dislike to pessaries. As the uterus was not flexed, but simply retroverted, I thought that by making a little traction upon the cervix posteriorly while the body was well forward, it would be possible to keep it there.

So far, the band remains firm and the uterus remains forward. It is possible that in this procedure we may have a means of relieving some cases of retroversion which are otherwise very obstinate.

It is true that in this case, and in the one just mentioned, the uterus could be kept in place by means of a pessary; but when this instrument is worn month after month and year after year, it causes some irritation, sometimes leucorrhœa, and necessitates daily injections, and occasional removals.

This patient will return again after her period, and we will then reduce the displacement and introduce a pessary, for with the relaxed condition of the vagina and perineum, and tendency to prolapsus of the uterus, it is not at all likely that it would remain reduced without support. After some months the instrument may be taken out a few days after a period, to ascertain if it is any longer necessary. In all these procedures avoid giving the patient any unnecessary pain. Use as little force as possible. Be content to do a little at a time, and be wise enough to desist and wait if you cannot accomplish your purpose easily, else the last condition of the patient may be worse than the first. Some women tolerate treatment better than others: therefore be very suspicious of new patients. I have known an attack of cellulitis follow the simple passage of the sound to the fundus of the uterus, done with the utmost care. Such an attack prevents all mechanical treatment, it may be for years, it may be forever; for when that form of inflammation has once been established, there is always a greater liability to it than before.

OVARIAN TUMOR.

This woman is 28 years of age, has been married nine years, and has had one

child and three miscarriages, her last pregnancy being six years ago. For seven years she has complained of backache, leucorrhœa, and pain for a few days before menstruation. The pain ceases when the flow becomes established. I shall have more to say about this last fact in another case. She states that she has less pain than when here before, but she has some backache when lying on the back at night. She still has leucorrhœa. She menstruates regularly.

In making the examination,—the patient lying upon the back,—introduce the index finger of the left hand into the vagina, and let the right hand rest upon the abdomen. With a little experience you will find yourselves thus better able to make a thorough exploration of the pelvic contents than if you were to reverse the position of the hands. It is utterly impossible to make a satisfactory examination with the finger in the vagina if the uterus be not steadied by the other hand on the abdomen; for, unless the organ be immovable, it will float away from and evade the finger as soon as pressure is made on the cervix.

Examining the patient in this manner, you will find that the cervix points forward, there being retroversion; that on the right side there is a mass rather indefinite to the feel, but which, probably, is the prolapsed and enlarged ovary. It may be an enlarged Fallopian tube, or a small cyst of the round ligament. The feeling imparted to the finger is that of hardness. The patient complains of pain in the pelvic region and in the breasts before the period. The pelvic pain disappears with the commencement of the flow. Many women have a slight pain in the breast before and during menstruation. Perhaps, as a rule, there is slight enlargement; but a severe pain in the breast I have found common in ovarian disease. She says there is sometimes a greenish discharge. A greenish discharge comes from the cervix or uterus, rarely from the vagina.

The best thing which can be done for the patient would be, if she could afford it, to try treatment by passing the constant current through the ovary, and iodine might also be painted over the region of the tumor. The patient might experience some relief if the uterus were thrown forward and kept there. But I feel sure, from the symptoms and physical signs, that there

is a beginning ovarian tumor, about as large as a pigeon's egg, and I think that in two months from now we will find the tumor as large as a hen's egg, or larger. I think it will grow: it is not the nature of such tumors to remain stationary. Yet, as the patient is not now suffering sufficiently to require an anodyne to relieve pain, and her general health is not being affected, I do not think we would be justified at present in submitting her to the risks of an operation. But after the tumor shall have become as large as a goose-egg, and continuing to grow larger, then it would be wiser to operate than to wait until it became of large size, filling up the pelvic and abdominal cavities and destroying the general health. Again, the tumor is at present on one side, and I think that where an ovarian tumor develops on one side, and is allowed to remain six months or a year, the other ovary is more liable to become affected than if the tumor were removed at an earlier period. And I think a mistake is sometimes made in removing the other ovary during ovariectomy when it is not apparently diseased. It should be examined carefully, and if it seem healthy, and the woman be young and otherwise capable of bearing children, it should not be removed. In some instances women having had one ovary removed for disease afterwards bear children, the other healthy ovary being allowed to remain. I recall the case of a strong, healthy woman in other respects who had a large ovarian tumor, and at the operation some of the gentlemen advised me to remove the second ovary, but I allowed it to remain, and since then I receive a letter from her about once in every eighteen months, announcing the birth of a child.

The tendency of late years in these cases is to operate early rather than wait until the tumor shall have become of large size. The late Dr. Peaslee always advised that the operation be postponed until the tumor attained large proportions.

CABLE despatches to the daily papers state that the cholera is slowly spreading through the south of France, and has reached Italy; but it does not appear to exhibit the malignancy in the smaller towns that it did at Toulon and Marseilles.

ORIGINAL COMMUNICATIONS.

NOTES ON THE TREATMENT OF
CHOLERA DURING THE EPI-
DEMIC of 1832.

BY HIRAM CORSON, M.D.,

Plymouth Meeting, Montgomery County, Pa.

TRUE cholera is so like cholera morbus in the exciting causes, the symptoms in the early stages are so similar, while both diseases are so unlike those of affections of all other organs, that we can regard it only as an affection of the mucous membrane of the stomach and intestines; but its course is often so rapid, its mortality so great, its passage from an infected district to other regions, hundreds of miles away, so mysterious and oftentimes so sudden and inexplicable, that the mind is bewildered, making us the more anxious to learn what the peculiar poison is which brings about results so distressing, changes in the system so great, and sweeps away so many lives despite our utmost skill.

The first symptom is nearly always diarrhoea, occurring while apparently in perfect health; then slight pains, followed by vomiting, profuse evacuations, cramps, and collapse. It is, under all its phases, a disease peculiarly of the stomach and bowels. Its varieties, from the first to the last, are only stages of the malady or aggravations of those preceding them.

In the examinations by Drs. Gerhard and Pennock, in the service of MM. Louis and Andral in La Pitié Hospital, the lining membrane of the bowels was always found red in places, and sometimes even, in the lower part of the colon, softened and greatly changed,—the result of congestion and inflammation. I quote from a single autopsy: "The mucous membrane of the large intestine was of a grayish color, at intervals slightly tinged with livid pink in its first third; grayish, livid red, in the eighteen or twenty inches which succeed; then in the last two feet brown, and exhaled a manifestly gangrenous odor." They made many careful examinations, and in all cases the bowels, large and small, gave evidence of changes due to congestion and inflammation. Prof. George B. Wood, a most careful and accurate observer, wrote, "That an irritation in the stomach and bowels exists in cholera

can scarcely be doubted; but examinations of those who die in the cold stage reveal no uniform and unequivocal evidences of inflammation; the injection of the mucous membrane is venous. The mucous membrane, throughout nearly its whole extent, is usually more or less reddened, and the parietes of the bowels are sometimes thickened, owing to the *venous injection* of the inner coat."

Prof. Jackson says of the pathology of the first two periods,—the periods preceding collapse,—"In these stages cholera is an irritation developed primarily in the mucous tissue of the alimentary canal." I shall have occasion to quote more at length from this authority when we speak of the collapsed stage.

I have been thus careful to point to the nature of this disease, to show that at first we have congestion and irritation of the gastric and enteric membrane, oftentimes very slight, and, even when severe, quite generally under control by "appropriate remedies," such as were in common use by physicians, in and out of hospitals, during the stay of the epidemic here. Everywhere the first persons attacked had allowed the premonitory symptoms to exist for hours—days, sometimes—before giving any attention to them: so that when brought to the hospital, or to the attention of the physician elsewhere, they had already passed into the stage of collapse. I shall speak now of the treatment which prevailed in city and country in cases still having a pretty fair pulse, though the vomiting and purging, and even cramps, were severe. Regarding it as congestion and irritation, venesection was very frequently used in urgent cases; but prior to a resort to it, the camphor mixture, sometimes called "Cholera Mixture of Dr. Parrish," freely given, would set even very threatening cases at rest. This came into very general use, was a most excellent remedy, and to this day has held the reputation then acquired.

The mixture of Dr. Parrish which attained so great favor and has so long been used is as follows:

R Aquæ camphoræ, fʒiij;
Spt. lavandulæ comp., fʒi;
Tinct. opii, fʒi;
Pulv. sacch., ʒij.—M.

Sig.—Dose, a tablespoonful. (The laudanum may be omitted.)

By some druggists it is thus made:

R Aq. camph., ℥iij;
 Sp. menthæ piperitæ, f3j;
 Magnesii carb., ℥i.—M.

Dose, one tablespoonful.

In many cases emetics were first given to produce free vomiting. The salt-water emetic was much used. One or two tumblerfuls of warm water with salt would quickly "wash out the stomach," as was said. The propriety of adding, by this nauseating, irritating dose, to the already too great irritation was not plain to me; but there was so much talk about the revulsion it produced, that, without knowing where the revulsion was manifested, I fell into line and tried it in a few cases, then abandoned it and opposed its use on the same principle that almost every practitioner opposed drastic cathartics, which then often developed the disease in healthy persons. Camphor in other forms than Dr. Parrish's was much used, as tincture of camphor with laudanum, or solid camphor with opium. Some physicians used the tincture alone,—one drop every five minutes, or five drops every half-hour or hour,—or in other proportions or combinations. As many patients were so quickly relieved by camphor, some believed it to have a specific effect. A few hours would, in many cases of cholera (as Dr. Jackson termed the first two stages), suffice to bring relief. When these means failed, and the disease was progressing, bleeding from the arms was generally resorted to, and often with prompt relief. I have often seen the pain subdued, the oppression relieved, and the patient become quiet and lie comfortably, when a few moments before he had been in great suffering and distress.

Drs. Caspar Wister Pennock and W. W. Gerhard wrote of the treatment before collapse as follows: "Febrile excitement should be reduced by bleeding, and, if local pains exist, by leeches; discharges checked by opium. When it has proceeded to cramps and profuse vomiting, blood-letting is advisable if the pulse be not much depressed, and should be carried as far as the strength of the patient will permit. The effect of it in the cases with which we are familiar was very happy."

Dr. Zabriskie, with his five hundred sick paupers, in Bellevue Almshouse, used leeches in his first variety with good results; in the second variety—the "mortal cholera," the same as prevailed in the Paris hospital, where ninety-six out of ninety-

seven died—he saved not one out of six cases that he bled, and he did not believe that any treatment would save such cases. I may add here that, when the feebleness of the patient forbade venesection, leeches were used in some cases by Drs. Gerhard and Pennock, because they had observed that "the most severe inflammations very often occur in the intestinal canal."

Dr. H. L. Hodge, late Professor of Midwifery in the University of Pennsylvania, then physician to City Cholera Hospital No. 4, writes, "Should the premonitory symptoms be neglected or injudiciously managed, the *sedation* of the capillaries is more marked, and there is fulness or oppression of the larger vessels, with the severe consequences already detailed." The remedies already recommended should now be actively exhibited, and will sometimes be adequate for the emergency, by recalling the circulation to the extreme vessels and restoring the secretions; but generally direct evacuation must be employed to relieve the congestion, which resists the natural disposition to reaction and the effect of remedial measures.

"Copious bleeding from the large veins had the most beneficial tendency,—not simply by unloading the vessels, but by thus indirectly facilitating reaction,—manifested by more fulness and activity of the pulse and renewed activity of the capillary circulation. The advantages were generally striking and immediate: the feelings of oppression about the head, heart, lungs, and abdomen were at once relieved; the surface would become warmer,—even the livid color would be lessened; the vomiting and purging would diminish or disappear, while a warm perspiration would be diffused over the surface, indicative of a similar return of the internal secretions. . . . It was observed that the blood first drawn was of a very dark color, flowed with difficulty and tardily, even from a large orifice in a large vein, sometimes guttatim, but soon a full stream of almost arterialized blood would sometimes be poured forth with considerable impetus.

"As in these cases the pulse would rise from its depressed condition, becoming full and active as the oppression was ameliorated and as the secretions and heat of the skin returned, large quantities of blood could often be beneficially abstracted: twenty to thirty ounces could frequently be taken from even delicate

persons, while from the strong and plethoric I have taken sixty to seventy ounces with great and immediate advantage, and without any reason subsequently to repent of it. The patient was usually found, at a subsequent visit, with a warmer skin, a fuller pulse, and more natural secretions. In cholera maligna we bleed not to diminish excitement, but to relieve oppression."

Dr. D. Francis Condie, so long the able reviewer of medical papers in Dr. Hays's *Journal*, says, "We have found the lancet, more especially cups to the abdomen, an important remedy."

Dr. Samuel Jackson, after giving his treatment of the two early stages by the ordinary remedies to allay pain, diarrhoea, etc., writes, "Whenever the vomiting and purging continued, accompanied with severe pain in the abdomen, then I had recourse to sanguine depletion, either general or local, or both, according to circumstances. General depletion was used in the limited number of cases in which the pulse was full and excited; but in the others, leeches or cups to the abdomen were found safer and better. It is surprising to witness how prompt often is the alleviation and abatement of the symptoms following the application of from thirty to sixty leeches to the epigastrium and the iliac regions. In no instance did I find it necessary in the patients I treated in the first stages to repeat the local depletion."

"In several instances general depletion made but little impression, while a prompt relief ensued upon local depletion."

"General blood-letting is but partially applicable to the cases of cholera. It should be restricted to those where the constitution is vigorous, and the patient not enfeebled by age, previous disease, or dissipated living."

There is another remedy which at that time was much used in many—I may say in nearly all—diseases, and was exhibited pretty freely in this. Hear what these practitioners say about calomel:

Dr. Jackson gives accurate detailed reports of many cases in all stages, but I cannot find that he used this medicine frequently. When he used it, it was in doses of from only one to four grains, repeated a very few times. He did not speak of it as an essential at all.

Dr. Parrish has left us no account of his opinion in relation to it in any medical essay known to me.

Dr. Zabriskie thought calomel in large doses to purge, and afterwards small ones to salivate, of great value. The drug was used until the stools became green, which occurred in his cases in from four to six hours. His habit was to give ten grains, with half a grain of opium and five grains of kino, every hour. Four doses generally produced the green stools, and then, except in the mortal cholera, the patient convalesced.

Dr. Hodge, after bleeding, treated his patients with mild diaphoretic anodynes, sinapisms, frictions, hot bricks, Cayenne pepper, etc., but he adds, "To fulfil, however, the all-important indication of re-exciting capillary action, no medicine was comparable to calomel. Other remedies were useful in accomplishing this object, but, however rapid in their action, their effects were often trifling and transitory compared to the decided and permanent influence exerted by mercury." He gave calomel in doses of two or three grains, alone or in combination with diaphoretics, every one, two, or three hours, until twenty or thirty grains were given, or the symptoms relieved. "It operates slowly, but very certainly, upon the extreme vessels, augmenting their circulatory and secretory actions, and thus admirably fulfilled the indications in cholera, and was, therefore, the main dependence of the practitioner." It seems, judging from what is said by Drs. Gerhard and Pennock, that mercurials were not used by MM. Andral and Louis at the French hospitals. They say, "Should the discharges be still abundant, they should be checked with opium, and, if the mercurials possess any efficacy in changing the course of cholera, theoretically we should advise their use at this point: practically, we know nothing of their action in this epidemic."

I cannot close this part of the subject without brief notice of the treatment recommended by Dr. Joseph Ayer, member of the Royal College of Physicians of London, a writer well known many years ago. He had in private practice 219 patients, of whom 176 recovered. (In Philadelphia, of 1175 in private practice, 905 recovered; about the same proportion.)

Dr. Ayer, in the premonitory stage, gave one grain of calomel, with two or three drops of laudanum, every half-hour for five, six, or eight times; then every six hours, or twice a day, for a time. In col-

lapse, he gave a grain in pill every five minutes, and with it a single drop of laudanum in a teaspoonful of cold water. In bad cases, he usually gave two grains of calomel every five minutes for an hour or two, and then he fell back to the ordinary dose of one grain. He used no other remedy,—neither bleeding, opium, nor camphor; no leeches, emetics, stimulants, external heat, or ice. He writes, “With the exception of mustard-plasters to the stomach (which I sometimes ordered and perhaps as frequently forgot) and bags of hot sand to the feet, with a regulated allowance of cold water as drink, I resorted to *no other means whatever, not even to a single trial of any other than the calomel and opium.*” He was thus exclusive so as to know that no other agent assisted in the cure. Well, there was sense in this. When I see a man sending in a prescription composed of eight or more medicines, I feel that he is a useless if not a dangerous practitioner.

I come now to the cold water and ice treatment. There was much difference of opinion in relation to the use of these articles. At that time (1832) cold water was not used at all by many physicians in *any disease* as a daily drink. As regards myself, I have never used warm drinks in *any* case, save when cold ones were not desired by the patient, from the first day that I began practice till the present moment. In the cholera time we all in this region used cold drinks. Who could use any other, when all others were disgusting to the poor patient, suffering a horrible thirst and crying for cold water? And yet it sometimes seemed useless, for it was instantly returned, and the cry was for more. We really had occasionally to prescribe the amount and the times when it should be used. Then we had scarcely a single ice-house in the neighborhood; now we have scores of them, and can by substituting ice for the cold water satisfy and relieve the patient.

Dr. Jackson commenced in his first cases to treat his patients with warm stimulating drinks, aided by external heat, such as the warm vapor-bath, then much in vogue. A patient, among the first brought in, was in a collapsed state, cold as death, and no pulse at the wrist, but she resisted the warm treatment,—“had,” he said, “an instinctive abhorrence of them: brandy, wine, ammonia, etc., were attempted to be forced

on her, but her resistance could not be overcome; her constant exclamation was for cold drinks, and against all warm applications. ‘Heat will murder me!’ was her constant exclamation: ‘give me cold—cold!’

“Nature is an instructor whose lessons are to be preferred to scholastic authorities, and the instinctive sensations of the organs are her language. The effervescing draught, iced, and iced water, took the place of stimulants,—were taken with delight, and largely demanded.”

I need only say that the patient recovered.

I cannot, though, refrain from letting Dr. Jackson speak again: “Until this case the patients received into the various hospitals had been treated with steam baths or heated vapor.” (He seems to forget Dr. Parrish’s trials with cold.) “I had assisted my associates charged with the care of these establishments, and it was the general impression that this means hastened the general collapse by the profuse discharge it caused. None of the patients survived over a few hours. This case made a strong impression on me, and gave a new direction to the treatment I pursued.”

It is not out of place here to refer to the use of cold *externally* in reduced conditions of the system. I truly regret that we cannot have the testimony of Dr. Parrish on this subject, for he seems to have tried it somewhat. As there is nothing so impressive as having a case before us, let me speak of one that had received the attention of Drs. Meigs, Beattie, and Jackson on Friday afternoon, and of whom the latter thus writes: “Saturday, August 25, 8 o’clock A.M.: patient alive, though barely animated; no pulse; universally cold; breath cold; voice nearly extinct; labial circulation continues, though very feeble; and the blood pressed from the veins slowly fills them again.

“Reflecting on the condition of this patient,—the vital movements nearly extinct, the circulation almost at a stand, the vital forces reduced to the lowest ebb,—we were struck with its resemblance to that which ensues from exposure to a low temperature. Though the causes are different, yet the condition is analogous in the two cases. In this state heat and powerful stimulants extinguish and do not reanimate the vital movements, or, if they be roused, it is only a momentary effort,

terminating speedily in irremediable exhaustion.

"We were struck with another analogy. The choleraic patient advanced to the condition of the case before us, with his blood but partially oxygenated, is reduced in the scale of vitality, and approaches, in the state and nature of his vital forces, to the animals of cold blood, or having a single ventricle. In all such animals a degree of heat equal to that of the human body is oppressive, benumbing, gives a strong tendency to asphyxia, while a degree of temperature which is often that developed by fever in the human organism is productive of fatal asphyxia in a few moments. In those animals also, when placed in mediums destitute of oxygen, if the temperature be elevated asphyxia is rapidly induced. The same animals in a low temperature approaching the freezing-point will survive a considerable period, and may be reanimated after a much longer suspension of their vital functions.

"Acting on these suggestions, I took a piece of ice and rubbed with it a hand and arm for a minute or two, following it up with dry frictions, first with my hand and then with a dry cloth. An instant change took place in the color of the skin. From a cerulean hue it became pink, and the sensation of cold was most agreeable to the patient. Encouraged by this experiment, the same process was extended to the whole body and repeated every half-hour. The temperature of the whole body soon improved, it acquired an agreeable warmth, and the skin felt dry and more natural. The treatment, with ice internally administered and the iced saline solution given in small quantities every few minutes, was persisted in during the day." The patient recovered, the convalescence beginning on the 27th. In his "Observations," he adds, "I have seen no other patients recover from so prostrate and apparently hopeless a condition as the subject of this case." We should not forget this case. A man in the very arms of death. Patient alive, though barely animated, says Dr. Jackson. Did he resort to the fashionable life-giving (!) whiskey? No! No!

Dr. Hodge says, "The free indulgence in cold drinks is productive of much mischief, by increasing the load and oppression at the præcordia and aggravating the vomiting; and thus the exhaustion of the pa-

tient is increased by the quantity of fluid and by the sedative influence of cold on the gastric mucous surface. But in *ice* we have a most excellent substitute. Ice, in small quantities, allowed to dissolve in the mouth, is exceedingly grateful. It quiets the morbid sensation, and moderates the restlessness, jactitation, and anxiety which do so much mischief."

I cannot leave this part of the subject without a word upon opium. Of this most valuable drug I need not say much more than that all relied on it as the one indispensable medicine. In the stages preceding collapse it often by itself, or with camphor, effected cures in very severe cases. As the value of this agent is fully appreciated at the present day, I need not discuss it further.

Before taking up the consideration of the treatment by other means than those mentioned, I may here speak of some peculiar pathological views upon which they were based. And first let me state Dr. Hodge's views of the nature of cholera. The opinions of the other physicians named in this paper have already been presented. They regarded irritation and inflammation of the mucous membrane of the alimentary canal as the cause of all the symptoms. Dr. Hodge regarded the condition there as one of *sedation*, not irritation. He says, "If the collapsed stage be regarded as the true type of the complaint, the evidence of sedation or diminution of action in the general system is undeniable. The cold and livid surface, the tearless eye, the pallid and cold tongue, the coldness of the breath, the weak, fluttering, almost imperceptible pulse, leave no mind in doubt respecting the prostration of vital excitement in all, or nearly all, the organic tissues.

"It is, however, contended that this sedation of that stage is a secondary condition, resulting not directly from the original epidemic cause, but indirectly from the occurrence of severe local irritation or inflammation; that vital excitement is so concentrated in a particular tissue, the gastro-intestinal mucous membrane, that torpor or prostration of the other tissues ensues. That this sedation is the direct and immediate consequence of the epidemic influence is, I think, fully proved by an examination of the symptoms preceding and accompanying the primary stage.

"There is no evidence at any time of vascular excitement, no frequency or irritation of the pulse, no dryness or heat of the skin, tongue, or any other accessible tissue. On the contrary, in many instances, long before there is any decided manifestation of the disease to the unobserving, and of course prior to any evacuations, the skin will be found pallid, and of a darker tinge than natural, the features contracted, the tongue pallid, the appetite impaired, the urine diminished in quantity, the stools of a light color. There is no evidence whatever of general excitation of the circulation at any period of the disease, whether of a mild or severe type." Dr. Hodge has much more on the subject; but this must suffice for the present.

Dr. Jackson, in opposition to these views, wrote, "In the first periods there are no evidences of enfeeblement of nervous power; on the contrary, the cramps of the voluntary muscles and the spasms of the muscular tissue of the alimentary canal are direct indications of an opposite condition. They indicate excitement and augmented energy of the nervous stimulations exciting the muscular power. The muscular power of patients is remarkable, considering the great intensity of the disease."

While these two eminent physicians, and others, who agreed with the one or the other, differed in their views of the affection, their treatment was nearly the same. I deeply regret that Dr. Parrish, whose counsel we so eagerly sought and whose teachings we so implicitly followed, has left us no testimony in relation to his pathological views and to the value of blood-letting. It is, however, well known that he used the lancet freely in cases where the pulse was readily felt at the wrist.

The eloquent and enthusiastic Dr. C. D. Meigs, then physician to Cholera Hospital No. 10, the teacher to whom thousands have since listened with delight, whose style was peculiarly his own, and whose courage dared give expression to his thoughts, has left us a record of his views. He did not believe in the inflammatory nature of cholera,—did not even believe that it was an affection of the bowels. I have not space here to do him full justice, to give proofs and illustrations of his interesting theory. I will essay to do it briefly. He regarded the brain as the *Being*,—the *Man*. All else—limbs and

organs—were servants, moved and compelled to do duty by that nervous mass. In its integrity all moved, all worked in harmony; but when it was touched by the cholera-poison its motor force was increased, and then came disorder everywhere; all the diseased phenomena witnessed in cholera resulted from the poison acting on the brain. The rice-water discharges which issued in full streams from stomach and bowels, and the sweat which came like rain from the skin, leaving but strings of clotted residue in the narrowed blood-vessels, made so by the condensing motor force, were forced through the parietes of every blood-vessel, from the mighty aorta to the finest venule of the body, just as the milk-maid presses the whey from the curd through the meshes of a linen cloth, leaving only a dry mass. I fear this may misrepresent him. Space or no space, he shall have fair play; he shall be heard. He writes, "Oken asserts that the *animal* is naught but nerve. Can you gainsay him? From the nervous mass, called brain, issue two, and only two, forces, one sensor, the other motor. Cholera is an exaggerated intensity of the motor force. Conceive, if you can, this exaggeration, then you will perceive in the malady a state of the nervous mass, which has resulted in the gradual or the sudden condensation of all the living solids,—not the muscles alone, which are racked with cramps or spasms, whether those of the trunk or limbs, or those of the alimentary canal, the bladder, uterus, etc., but condensation of every artery, arteriole, capillary, and venule, of the cellular tela, of the skin, the parenchyma of the lungs, the acini of the liver, and all other textures. Every organ, every granule, every tissue in a general anatomy, and every molecule, tends toward condensation under the stimulation of cholera-poison. So that the whole living mass is, as it were, under a squeeze,—the cholera-squeeze."

"It is a state of [hyper]æsthesia, and can be relieved only by anæsthetics. Of *anæsthetics* there are but two dependable ones in the world,—opium and the lancet."

Such were his views: what was his practice? By quoting a single case I shall make it plain:

"Salvador, an athletic Sardinian, was pulseless, algid, blue, voiceless; skin puckered and adherent to the periosteum of the phalanges; the tongue cold, and mu-

cous membrane of everted lips cholera-blue. He had been under the cholera-squeeze. There was no time for opium. I tied up his cold arm, and opened the median vein. It would not bleed. I drew out a long veno-morphous clot, and the blood trickled down into the bowl. I rubbed his arm and hand, and it began to flow, the perishing man being all the while as composed and sensible as if in perfect health." The rest I sum up. He fainted; was revived; the anæsthesia was perfect, and from that moment he convalesced.

Here we again see that a dissent from the inflammation theory did not lead to a different practice, though it is proper to say that Dr. Meigs opposed all emetics and cathartics. The condition of the blood deprived of its water led to the idea that if a solution of the saline ingredients in warm water, in the proportion which they hold to the serum in normal blood, could be thrown into the veins, the clotted blood might be made fluid, the fulness of the vessels be restored, and the circulation be established even in the extremities, and the heart be stimulated to increased action. When this idea was acted on, how wonderful the results!—the unconscious and dying man restored, as if by magic, to life and comfort. Dr. Thomas Latta, of Leith, Scotland, in 1832, before it reached us, by resorting to this expedient saved some cases from impending death. I will give one case. (Before doing so, let me say that Dr. Jackson reports the temperature of the body in cases of extreme collapse as 90° , 91° , 92° , and even in some as low as 84° in the mouth.)

Dr. Latta says, "If the temperature of the water injected be so low as 100° , it produces an extreme sense of cold, with rigors; and if it reach 115° , it suddenly excites the heart, the countenance becomes flushed, and the patient complains of great weakness."

Numerous trials were made before the amount to be injected and the proper temperature of it were ascertained. Of his first case he thus speaks: "An aged woman had apparently reached the last moments of her earthly existence. I feared I should be unable to get my apparatus ready ere she expired. Having inserted a tube into the basilic vein cautiously, anxiously I watched the effects. Ounce after ounce was injected, but no visible change was produced. Still perse-

vering, I thought she began to breathe less laboriously; soon the sharpened features and sunken eye and fallen jaw, pale and cold, bearing the manifest impress of death's signet, began to glow with returning animation; the pulse, which had long ceased, returned to the wrist; at first small and quick, by degrees it became more and more distinct, fuller, slower, and firmer, and in the short space of half an hour, when six pints had been injected, she expressed in a firm voice that she was free from all uneasiness, actually became jocular, and fancied all she needed was a little sleep; her extremities were warm, and every feature bore the aspect of comfort and health." As he was weary, he left her in charge of another, who failed to watch her closely, and she again fell into collapse, and died. It should have been repeated, as the following case will show:

"A woman, aged 50, on the 13th instant, at 4 A.M., was seized in the most violent form, and by half-past nine reduced to a most hopeless state: pulse gone at the axilla. I injected one hundred and twenty ounces, when, like the effects of magic, instead of the pallid aspect of one whom death had sealed as his own, the vital tide was restored, and life and vivacity returned; but diarrhœa recurred, and in three hours she again sunk. One hundred and twenty ounces more were injected, with the same good effect.

"In this case three hundred and thirty ounces were so used in twelve hours, when reaction was completely re-established, and in forty-eight hours she smoked her pipe, free from distemper. She recovered."

What success our Philadelphia physicians had with intra-venous injections is not known to me. In reading these cases I was amazed that so much fluid could be thrown into the veins and yet not distend them. It shows what a large amount of blood circulates in the body when in health. Dr. Jackson says we have five hundred ounces. I must not neglect to say that the solution used by Dr. Latta was composed of from two to three drachms of muriate of soda and two scruples of the subcarbonate of soda, with six pints of water. Our timid friends who think "no one has a drop of blood to spare," and who stand by the suffering patient and see him die rather than relieve him by bleeding him to unload the vital organs,

oppressed by congestion or their functions destroyed by inflammation in acute diseases, should from these cases be encouraged to believe that they might, in inflammatory diseases, draw even large quantities of blood at times without endangering the life.

Of the physicians spoken of in this paper not one believed in its contagious character. Nor did they regard quarantine as being of any value. But, though holding these opinions, I am not aware that they favored the doctrine of Mojon, a professor in the medical department of the University of Genoa. In 1832, when Dr. Mojon learned that the cholera prevailed in Paris, he hastened to that city to investigate the cause and nature of the disease. He afterwards published an essay in which he advocated the doctrine (recently revived by Koch in more precise terms) that "the efficient cause of cholera consists in animalcula floating in the atmosphere, and which, penetrating into the system through all the pores" [how like the report of Prof. H. C. Wood about the Wisconsin diphtheria!] "situated on the internal and external surfaces, give rise to the symptoms." His essay is an exceedingly interesting one, and his doctrine will, no doubt, be now regarded with favor; and should it be found to be true (by discovery with our improved means of observing minute germs), let us not forget to give due credit to Dr. Mojon, who, though not the originator of the idea, more than any other man clearly presented it to the people.

While the cholera was sweeping off hosts of victims in Montreal, there one day appeared in that city a man strangely attired, and with a full beard,—then a most unusual thing,—mounted on a Texas pony (or, as they are called, mustang), leading some others, and followed by several dogs. It was a novel sight in the city, and as he passed from street to street the "wonder grew," and the questions were, "Who is he? Whence came he?" It was soon known that he claimed to be able to cure the cholera. The city was filled with mourning and terror; people were anxious to receive aid from whatever source it might come. Some went to his quarters for the cure; others he visited at their homes; some cures were effected; the excitement became intense; crowds flocked to him; his exploits were heralded all over the

country, and the efforts of physicians paled before his reputed successes. The disease soon ran its course in Montreal, and the people were ready to believe that the mysterious doctor had caused its decline. There was a public meeting to express the grateful feeling of the citizens for the timely arrival and eminent services of the cholera doctor, and he was voted the freedom of the city. Other places applied for his services, and he was conveyed from the city to give his remedy and life-giving services to bands of Indians whom the disease had reached. The cholera passed away, the cholera-doctor's services were no longer needed, winter and spring had come and gone, and I had forgotten the mysterious stranger, his dogs and horses, when by chance I was brought face to face with them. He had come to Spring Mill to see his friend Peter Légau, a French surgeon, who had managed the property of the luckless "Philadelphia Vineyard Company." Though Mr. Légau was deceased, the stranger was, as in former times, a welcome guest in the home of the daughter. On meeting him, I found a man of middle age, tall, thin, calm and dignified in bearing, dressed in light linen clothes. At night he slept on the floor without a bed. Whatever cover was over him was of linen, so that the "electricity could have a fair chance to circulate around him." There were many peculiarities about him, but he was not an uninteresting man. When I told him that we had heard, even at this great distance, of the success of his labors in Canada, he appeared to be gratified, and told me much of his doings there. He said that his name was Stephen Ayres, that he was a graduate of Princeton College, a licensed physician of the State of New Jersey, and for the past few years a resident of Texas, then to us almost an unknown region. The remedy used by him was simply pulverized charcoal mixed with lard. It was prepared by himself, and given to all with special directions to be followed to the very letter. He was a shrewd man, and, while he affected to have unbounded confidence in the value of his remedy, he was not blind to the effect which his mysterious manners and movements had on the minds of the people. Charcoal, however, was not then a new remedy, as many used it in bowel affections and gastric disorders.

In this long and, to some, I fear, wear-

some paper I have desired to present to the profession of to-day the views and practice of some of the eminent men—now no longer with us—who, fifty-two years ago, met a disease new to them and fought it with the weapons at their command. It is pleasant to record the testimony of men so justly eminent. It is instructive to ponder the results they have recorded,—patients in the embrace of death brought back to life, sometimes by venesection, sometimes by being rubbed all over with ice, sometimes by quarts of warm water being forced into their veins. Though I have made long extracts, my regret is that I could not present all they have written.

HOW TO PREPARE ANTISEPTIC DRESSINGS OF MERCURIC BICHLORIDE.

BY CHARLES MEIGS WILSON, M.D.

NOW that the advantages of the mercuric bichloride as an antiseptic dressing have been clearly established, receiving as it does the sanction of so many eminent surgical authorities, and becoming extensively employed in hospital and private practice, a few words as to its proper preparation for such purposes may be of interest. Corrosive sublimate is soluble in water in the proportion of thirty grains to the ounce. Various vehicles have been employed, as glycerin, ether, alcohol, or the latter in equal parts and water. Of all these the preference should be given to water as a medium, because of its capability of imbibition and solution, and the readiness with which it may be obtained. Sufficient sodium chloride should be added to solutions of the sublimate (an equal part) to prevent the latter's decomposition and the formation of calomel. In hospitals it is possible to have the solutions freshly prepared and frequently renewed, but in private practice this is not always feasible, especially if the case be of long duration and at a distance from a drug-shop. A convenient solution for private use, and one which will keep indefinitely, is the following:

Hydrarg. bichlor., ʒii ;
Sodii chlorid., ʒi ;
Aquæ destillat., fʒiv. —M.

One fluidrachm of this, added to a pint of

water, makes a solution of about one to a thousand. Sir Joseph Lister* makes use of the following formula in preparing solutions of corrosive sublimate: One drachm by weight of a solution, one part of corrosive sublimate in one and one-half parts of glycerin, contains two-fifths its weight, or twenty-four grains, of the sublimate. This multiplied by one thousand (the proportion of water required) gives twenty-four thousand grains, or nearly three pints. It is, however, much more convenient to use fluid measure than weight, and one fluidrachm of the glycerin solution referred to requires four pints of water to produce the one to one thousand solution. Surgical authorities are pretty well agreed that one to one thousand is the proper solution to use for douching, washing, and dressing wounds. For vaginal or uterine irrigation, one to two thousand is the proper strength, and no stronger solution should be used in abdominal surgery. The best medium in which to use the corrosive sublimate for surgical dressings is finely-pulverized wood.* This may be obtained at a number of the instrument-makers' and drug-shops. The wood-wool is sterilized by being subjected to a dry heat (above 220°F.). It is then soaked for twelve hours in a one-half per cent. solution of corrosive sublimate; afterwards it is spread out and dried. It is then placed in a bag of gauze (such as is used for the Lister dressing) or mosquito-bar netting, prepared by being saturated with the following solution:

Corrosive sublimate, gr. x;
Alcohol, fʒix et fʒii ;
Glycerin, fʒi et ʒxx .

This dressing is applied dry. Care should be taken to apply the dressing so that the margins of the bag extend an inch or so beyond the margins of the wound. This dressing is capable of absorbing twelve times its weight of water. It is applied with the ordinary roller, and requires no mackintosh or covering.

In cases in which there is a moderate amount of suppuration this dressing may be left until the external dressing becomes soiled. The wood-wool prepared according to the above formula is the dressing which is almost exclusively used at St.

* Brit. Med. Journal, May 24, 1884.

† This wood-wool may be obtained from M. R. Hopkins, 72 Duane Street, New York.

Thomas's Hospital and many of the other London hospitals. The following formula I take from the report of St. Mary's General Hospital, Brooklyn, N.Y. Dissolve six grains of the corrosive sublimate in a half-ounce each of ether and alcohol. Dissolve twenty-four grains of the chloride of sodium (added to prevent the decomposition of the sublimate and formation of calomel) in an ounce of glycerin. Mix the two solutions, and triturate well with one pound of wood wool; spread out to dry, and, after the ether and alcohol have evaporated, mix well with one part to ten by weight of powdered naphthaline. Thus prepared, we have a dressing that can be applied in a dry state, will absorb twelve times its own weight of water, is easily prepared, is simple, readily applied, and, above all, fulfils all the requirements of a true antiseptic dressing. The combination of these two agents gives us the most powerful germicide we know of,—viz., corrosive sublimate,—thus insuring a perfectly aseptic dressing, which, while it prevents any decomposition of the secretions of the wound, offers but a slight obstacle to germ-laden air, and the naphthaline constantly given off in a gaseous state by the heat of the body maintains a true antiseptic atmosphere around the wound. Naphthaline is non-poisonous, has established antiseptic properties, and appears to exert a specific influence over the contagion of erysipelas. The wood wool prepared in this way is used as a dressing in precisely the same way as that prepared by the first formula. The indications for renewal are the same as those in any other form of antiseptic dressing. The simplicity of these dressings is their great charm, and renders them especially applicable for primary dressings. Equipped with a few bags of this dressing and a few roller bandages, the ambulance surgeon would be ready to place a wound almost immediately after its occurrence under antiseptic conditions. This is important in all cases, but especially so in cases of penetrating wounds, compound fractures, and other severe injuries.

The following precautions should be used in operations. Before the operation, the parts should be freely doused with the 1-1000 solution. An asepticized ligature (pure silk is preferable) should be used. All hemorrhage should be checked temporarily with the Billroth artery-forceps,

until a ligature, if one is needed, can be applied. Before the wound is closed it should show no evidences of hemorrhage; and before the final stitches are placed *in situ*, the innermost recesses of the wound should be well *flooded* with the 1-1000 solution. The same solution should be used to asepticize the sponges, and in the interim between operations they should be left to soak in a one-per-cent. solution. When it is desired to wash out the uterus, as in cases of puerperal septicæmia, 1-2000 is the proper strength to employ. In uterine irrigation the method by simple hydrostatic pressure should always be used, as otherwise there is danger of introducing air with the syringe.

As a disinfectant, corrosive sublimate is the best agent we have, because of its germicidal properties (which are unrivalled), because of its cheapness and the simplicity of its preparation, and, what is very important, it has no odor. A solution of bichloride of mercury for disinfecting purposes is readily made by mixing it with an equal part of common salt, and dissolving in water in the proportion of one gramme to one thousand cubic centimetres, or one ounce to eight gallons of water.* As far as the danger of mercurialism goes, in my own experience, embracing over four hundred cases, most of them severe cases, in hospitals in which no walking cases were admitted, I have seen only two cases of ptialism, one in a negro woman aged 50, in whom the "dinner-plate" amputation of the right mamma had been performed. Her condition was miserable from the outset; and, after three weeks' continuous dressing with the 1-1000 solution, pyæmia developed, attended with uncontrollable diarrhœa; at the same time there was marked increase of the salivary secretion, but no mercurial fetor, and no blueness of the gums. The other case was that of a hospital-nurse, who, in order to get a holiday, simulated mercurialism; but careful investigation showed that he was feigning. These two cases I mention because some of the house-staff at the Pennsylvania Hospital, where they occurred, considered them as genuine cases of poisoning by the solution, though I believe that in reality they were not. At present the mercurial bichloride in the proportion of 1-1000 is extensively

* Med. News, August 2.

used as an antiseptic in the Jefferson, Pennsylvania, and Blockley Hospitals in Philadelphia. Personally, I have used it in a large number of cases with the best results,—among others, several cases of compound fractures, which did exceedingly well. In a recent number of the *Medical Record* I reported several cases of penetrating wounds of the abdomen, in which, though brought into direct contact with the perineum, no effects of mercurialism were observed, and the wounds healed promptly. It is to be hoped that some day it may be tried in a case of laparotomy. As a dressing, the sublimate has received the sanction of nearly all the Continental and English surgeons, among them that of the great apostle of asepsis, Sir Jos. Lister. In America it is even more extensively used.

SOME NOTES ON MEDICAL JURISPRUDENCE.

BY JAMES A. RILEY, ESQ.,

New York.

THE question of expert evidence is a vexed one, and much has been and much can be said both in favor of and against the methods now in use in the courts for securing testimony of this character. A good many of the thinkers on this subject are of the opinion that the experts should be called by the court for its own information and that of the jury, instead of by one side to bolster up its own case, in which event bias is always possible and generally probable. A curious instance of the extent to which the testimony of physicians is sought in some cases comes to us from a Michigan court, and the great interest of the matter consists in the attempt to get medical evidence, not as to the effects of wounds or disease, but as to the results upon the health of words spoken. The case was that of a person threatened with expulsion from a railroad-train for using part of an excursion-ticket, the other part being detached. The passenger claimed that the words and threats of the conductor affected his health, and called a physician on the trial who testified to that effect. This was regarded as an error when the case came up on appeal, and the court commented as follows on the proposition to allow medical

testimony as to the effect of mere words upon the health: "The medical evidence which was given in the case respecting the effect of the alleged assault upon the plaintiff's health seems to call for some comment. As the assault was a battery only in a technical sense, and there was no pretence of injury except such as might come from mere words,—from the mere expression on the part of the conductor of a determination to put the plaintiff off the car unless he paid his fare,—the proposition that it was proper to call expert witnesses to show the possibility of injurious consequences from such words to the plaintiff's health is suggestive of possibilities in the trial of cases which the trial judge may well contemplate with some solicitude. If expert evidence of the sort were admissible in this case, it is difficult to conceive of a case of assault and battery or of any other case in which vexing or provoking words are made use of where the expert witness may not become an important factor in determining the result." The decision of the court did not hold directly that the testimony as to the effect of words spoken upon the health was improper, though this was the inference; but it was decided that if such testimony were to be admitted, other testimony, showing the passenger's weak condition of body, should be taken as proof that the words of the conductor were not entirely the cause of his sickness.

A recent case in New Hampshire brought up the question of the power of a health board to employ nurses for the proper care of persons afflicted with contagious diseases who were committed by the authorities to a pest-house, and to charge the town for such services. The court held that they had the authority to bind the town, and gave an interesting opinion, as follows:

"Having power to compel the confinement of infective persons and prevent their communication with others, and having exercised that power, it became their duty to provide for the wants of those confined there. They could not shut them out from communication with their friends and with the world and deprive them of any means of obtaining assistance, and at the same time lawfully withhold necessary support and care. They could not establish a hospital without ordinary hospital accommodations, and they

could not make the hospital a place of involuntary confinement and escape the duty of supplying the reasonable wants of those who, by confinement and seclusion, were prevented from applying to any one else for relief. They could not furnish relief against the will of those confined, and afterwards recover the expense of them or of those liable in law to support them. *Farmington v. Jones*, 36 N. H., 271. If the health officers were obliged by law to confine persons infected with dangerous diseases, and it was their duty to nurse and support them, and they could not recover the reasonable expense from them or from their guardians, they would be remediless unless they could charge the expense upon the city. The law does not require the performance of a duty and at the same time withhold the means reasonably necessary for its performance."

The power to abate nuisances is frequently exercised by courts at the instance of health boards, and the latter are particularly active now in these times, when there is danger of cholera in every sea-board city and town. A recent instance of such activity was shown in the application made in an English case to oblige a railroad company to remove its cattle-yards from a place where they were alleged to be injurious to health, and this the court directed to be done.

In a case not long since before one of the English courts, a person sued a surgeon for negligence in allowing him to suck a tube used in the operation of tracheotomy on his child for diphtheria, without warning him of the danger, with the result that the father contracted diphtheria. The result of the suit was, however, in favor of the surgeon.

A curious problem is now before an English court,—viz., to decide whether a man can give away his head after it has become what one of the papers styles a dead-head. It seems that a person who had no sentimental notions about the disposal of his body after death sold his head to the village physician, who was to defray the expenses of the funeral of the rest of his body. The owner of the head is now dead, and the physician claims that the contract shall be carried out by the relatives of the deceased. As there is a large estate, the family are desirous of avoiding the contract, and the court has to decide which has the better claim.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF THE COLLEGE OF MEDICINE, LOUISVILLE.

CLINIC OF PROF. DUDLEY S. REYNOLDS, M.D., PROFESSOR OF GENERAL PATHOLOGY AND DISEASES OF THE EYE, EAR, AND THROAT, HOSPITAL COLLEGE OF MEDICINE, MEDICAL DEPARTMENT OF CENTRAL UNIVERSITY OF KENTUCKY, LOUISVILLE.

Reported by ALLEN KELCH, M.D.

NOVEL TREATMENT OF PTERYGIUM.

GENTLEMEN,—This is Jacob B., æt. 46, a teamster. He received a lick in the left eye with the knot on the end of a whip-cracker about a year ago. The eye became intensely red, and his sight disappeared at once from the moment of the receipt of the injury. Two hours later the anterior chamber was full of blood, the tension of the eye was greatly reduced, and I expressed it as my opinion, after examining him, that the eye had been fatally injured and should be at once removed. To this Jacob demurred. During the night, as I had predicted, pain of a very severe character came on, and the next day he wisely concluded to comply with my suggestion. Accordingly, the eye was enucleated. A section showed detachment of the retina, rupture of the capsular ligament of the lens, and extensive hemorrhage into both the vitreous and aqueous chambers.

This eye had been his main reliance for many years, in consequence of a large pterygium which you now see occupying the nasal side of the right eye. It was my design to remove this growth long ago, but, as he feared the results of the operation, it was deferred, until, as you now see, the apex of the pterygium has advanced beyond the vertex of the cornea. To-day he is in a pitiable condition, having been out of work for many months, with a gradual advance of this growth upon the surface of his only remaining eye; his vision has been gradually obscured until he is barely able to find his way about.

A pterygium is a singular kind of growth: it is a sort of hypertrophy of the connective tissue surrounding certain blood-vessels. It is triangular in form, though more distinctly so in many cases than it is in this. This pterygium, whilst it has a moderately broad base at the inner canthus of the eye, is a full quarter of an inch wide at the apex upon the corneal surface. It is desirable to remove this growth in such a

manner as to restore as much as possible the transparency of the cornea. If I cut it out, dissect it off, remove it entirely, a wide breach of continuity in the tissue must result, and, if this is permitted to remain open, cicatricial contraction will go on to limit the motion of the eyeball and thus interfere greatly with the man's vision. If I attempt its removal by strangulation, as suggested by Stellwag, I shall have much the same difficulty to encounter. If I attempt the practice of transplanting it, as has been recommended and practised by many, I shall have the difficulty to encounter which follows the organization and contraction of plastic tissue covering the surface of the ball from the inner canthus to the junction of the sclera and cornea.

The object of an operation is here, manifestly, to get rid of as much of this tissue as possible in contact with the ball: hence we shall seize it with Graefe's fixation forceps at the point of union between the cornea and sclera, and by closing the forceps and making forcible and continued traction the apex begins to tear loose from its attachment with the cornea, and by a little coaxing with the back of a Graefe's cataract-knife a pretty clean dissection is made, so as to leave none of the morbid growth upon the cornea. Then by carrying the line of division along down the side of the growth to its base it may be turned back, and by making curvilinear section of the conjunctiva in the limbus to the extent of a quarter of an inch from the opening, then dividing with scissors the conjunctiva towards the equator of the globe in a radiary line from the centre of the cornea, a flap is formed, which, by clipping a few fibres of loose connective tissue, may be turned so as to meet a corresponding flap from the opposite side, and by stitching these together cover the exposed surface behind the pterygium, thus closing up the opening made by its removal. The sutures will come out in two or three days, and, healthy conjunctiva being thus united at the point where the pterygium was attached, the exposed surface of the globe from whence the flap was taken readily heals over by the extension of newly-formed connective tissue, which is soon covered by epithelium, and no mark remains upon the surface of the ball to indicate where the pterygium grew, except the slight gray opacity of the cornea where

the apex was attached; meantime, the pterygium proper shrinks and disappears. This is the most successful method of operating for the complete and radical cure of pterygium with which I am acquainted. I believe it has never been published except in some of my clinical lectures.

IMPAIRED NUTRITION, GLANDULAR ENGORGEMENT, AND ENLARGED TONSILS DUE TO DEFECTIVE DIET.

Carrie H., æt. 13, has enlarged tonsils, obstructed breathing through the nose, is emaciated, and has enlarged lymphatic glands in the neck; is the subject of fissures about the meatus of the nose and at the corners of the mouth; has an aversion to animal food; eats nothing, her mother says, but molasses and stewed apples. She has lost flesh rapidly within the last month, and, although her mother says she is not sick, she is constantly clearing the throat and picking the nose, is restless, and does not look as though she were more than eight years of age. The mother is a pale, emaciated subject, with lymphatic engorgements likewise. None of the family are in good health, though none are positively sick. There are no evidences of syphilis in any of the family, and I know them all well, having attended them occasionally for years: in fact, I delivered this child about thirteen years ago. The family are in reduced circumstances; Mr. H., being a cooper, does not work all the year; his wages are not large, and his family expenses exhaust every cent of his income.

It is common to say that such a case as this is a typical representation of scrofulosis, whatever that may mean; and the theory is greatly strengthened by the fact that all the family suffer from glandular enlargements. They are all pale and debilitated; none of them are fond of animal food, and their diet consists chiefly of dried meats, bread, fried bacon, salt fish, eggs, potatoes, and cooked fruits, with an abundant supply of that most abominable of all substances, common molasses.

These people none of them take a sufficient amount of the force-producing agents which add real strength to the body. The only animal foods they take are a little butter, which is generally somewhat rancid, because they cannot buy the best, and the fat obtained from frying bacon or the bacon itself. When we consider, then, that the larger portion of the diet of these people is made up of worse than inert substances,

it is no wonder they have glandular enlargements, constitutional debility, that they are pale, feeble, and waxy.

No local treatment can do this girl any good, except it be in the nature of removing accumulated lymph from the nasal passages. It would be positive malpractice to cut these tonsils, although they are almost in contact, so large have they become. The tonsils are lymphatic glands, and depend as much for their size in this case upon the engorgement of the lymph-channels generally, as do those other glands which you see here in the submaxillary region and along the line of the sterno-cleido-mastoideus muscle throughout its whole length. I have no hope of curing this child, but I believe she may be materially benefited by such palliative treatment as will tend to keep the tenacious lymph in the nares in a liquid state to facilitate its expulsion. To do this we must have something constantly present upon the surface of the membrane which has the power to dissolve the fibrinous properties of the lymph, and which shall not at the same time irritate the membrane. This may be had in the judicious administration of a powder made after the following formula :

R Pulveris sodii boratis, ℥ss ;
Pulveris sodii chloridi, ℥ss ;
Pulveris cubebæ, gr. v.—M.

Sig.—Use as a snuff.

By using two ordinary conical ear-specula, turning the bases together and putting the nozzle of the Politzer air-bag over the tip of one of them, the other may be made to contain the powder, and by returning them base to base, inserting the tip of the distal speculum into the meatus of the nose, compression of the air-bag forces a sufficiently powerful insufflation of the powder to drive it into all the crypts and sinuosities of the naso-pharynx. This powder will remain there until enough of the accumulated secretions or exudations are poured out for it to act upon in the production of a liquid which by nature will flow into the pharynx and suggest the propriety of the patient's snuffing and hawking to expel it.

She may have the syrup of the iodide of iron, combined with glycerin and simple syrup in equal proportions, of which she can take a teaspoonful at a dose after each meal. She is to be encouraged to eat fresh meats and common vegetables, well

cooked ; to eat the ripe fruits and melons of the season ; to eat no more cooked fruits, no more pie, no more molasses, the object being to avoid the introduction of glucose, which is an already digested form of food and which has therefore no power as a force-producing agent. The act of transforming the food in the process of digestion gives to the animal economy its force, its power, and whatever of the protoplasmic material may be developed as the result of this action will go to supply the wasting tissues. Thus the purposes of nutrition are fulfilled.

J. W., æt. 9, came here a month ago, in a much worse condition than the patient who has just left. His tonsils were actually in contact ; his submaxillary glands were nearly as large as hen's eggs ; he had an eczematous eruption upon the chin and lower lip ; his eyelids were thickened and the lashes matted together with encrusted matter. You see to-day he is a handsome, bright, clear-complexioned, vivacious chap, full of animal spirits. His tonsils are now no larger than butter-beans ; they do not approach sufficiently into the throat to offer any material obstruction to either swallowing or breathing. He no longer suffers from the accumulating lymph in the nasal passages, and, although he has lost the inferior turbinated bone upon the right side, the nares are now free from accumulations of any foreign matter. His breathing is normal ; his complexion is bright, as you see ; his submaxillary glands are no longer visible, though they may be felt by close search. You ask what has brought about this change. I tell you, total abstinence from glucose in all forms, and the constant cultivation of the habit of eating fresh animal food with plain common vegetables and ripe uncooked fruits, with the seasonable melons, etc. I have not even permitted him to eat cakes or candy, and he often begs me for permission to eat ice-cream, which I have likewise forbidden. His family are in better circumstances than most of the people who come here ; in fact, he is not properly to be considered a beneficiary of this clinic, but has appeared here from time to time by special request, that I might be able to exhibit the character of his affliction and the progress he has made under the treatment.

He has used a spray made of the solution of borax and chloride of sodium, and has

taken now for nearly three months ten minims of the syrup of the iodide of iron in combination with glycerin and simple syrup after each meal, and has had no other treatment. His tonsils were neither cut, burnt, nor in any way treated by local application.

FOREIGN BODY IN THE EYE, CAUSING DIS-ORGANIZATION, AND REQUIRING ENUCLEATION OF GLOBE.

J. H., of Washington County, Ky., æt. 29, was engaged in breaking rock on the turnpike, when a spall struck him in the left eye, penetrating the globe. Inflammation and severe pain followed. Poul-tices were applied; the lids became swollen, general suppurative inflammation of the globe set in, and he was in a pitiable condition. In this state he sent for Dr. Caldwell, of Bloomfield, who ordered the poultices removed at once, and, recognizing the grave nature of the affection, applied an infusion of poppies, and gave him a purgative followed by a good dose of quinine, which so improved his condition as to enable him to make the trip to Louisville. He arrived this morning, and I shall now proceed to administer chloroform and enucleate this eye, which, being wholly destroyed and of no further use to him, is at the same time extremely liable to provoke that most frightful disease called sympathetic ophthalmia in the fellow eye. This makes it urgently necessary that this one should be completely enucleated. (Chloroform being administered by Mr. Switzer, the conjunctiva was divided all around at the corneal margin, the tendinous attachments of the recti muscles were carefully severed, the optic nerve was cut close to the globe, the obliquii also were finally cut, and the enucleation was complete.)

The eye now being enucleated, as you see, I proceed to apply a pad of cotton-wool previously wrung out of cold water, which shall act as a compress to restrain hemorrhage, the aid of a roller bandage being employed. This will remain firmly in place for twenty-four hours, when it may be removed. If no pain occurs, it is perhaps best it shall remain for forty-eight hours. A small collection of pus may be found adhering to the compress, but by a little bathing in tepid water no further bandaging need be practised. This man can have an artificial eye within a week, and return to his home.

TREATMENT OF TRACHOMA.

Miss L., æt. 15, well developed, of good constitution, and has never taken any medicine; her lids are puffy; the eyes are morbidly sensitive to light; the balls are not red, as you see. She complains of headache in the morning, irregular appetite, and fears blindness. Everting the lids, the conjunctiva exhibits no sign of inflammation, yet it is studded over here and there with minute ovoidal bodies lying in the substance of the conjunctiva and presenting the appearance of rice-grains, clear and smooth. These bodies are crowded close together throughout the whole of that portion of the conjunctiva which lines the lids and the retrotarsal portion which connects the lining of the lid and the covering of the ball. The arches of the soft palate and the posterior wall of the pharynx are likewise studded with these minute bodies. She has no irritation of the throat. An important question arises here. This condition, from the appearance of the invaded membrane and the character of the bodies mentioned, is denominated trachoma. Many practitioners recommend the use of caustics; others insist upon the marvellous powers of ointments,—Prof. Seeley, of Cincinnati, being particularly clamorous for the introduction of an ointment made of the yellow oxide of mercury and vaseline. The long-continued course of treatment described by these gentlemen who advocate so earnestly special local methods led me long ago to doubt their value. In the absence of inflammatory action there can be, to my mind, no reasonable excuse for making stimulating applications to the conjunctiva. Mr. Marston described this condition as he observed it among the British troops in India. He studied it carefully, and came to regard it as one of the earliest manifestations of the presence in the system of what is termed malaria, or marsh miasm. He considered that the conjunctiva afforded the earliest indication for the use of the sulphate of quinine. His report is so interesting and so elaborate in detail that it will long be recognized as one of the classics in medical literature. This girl is constipated. She has a distinctly periodical headache. We shall give her five grains each of calomel and chlorate of potash in powder at once. At bedtime to-night she shall take fifteen grains of the sulphate of quinine. She shall take ten grains Tues-

day night and Wednesday night, and come here again on Thursday. The eyes are not to be medicated, inasmuch as the disease which has brought about the oedema of the lids and the morbid sensibility to light is constitutional in origin. There is no demand for local treatment. If I should be asked to name a manifestation of disease which will yield promptly to a routine method of treatment, I should name trachoma, and in the recent forms of it I should name the precise method of treatment suggested in this case. I am confident she will return here next Thursday very greatly improved, if not wholly cured of her trouble.

TRANSLATIONS.

UNUSUAL FORM OF URETHRAL STRICTURE.—A man, 48 years of age, was brought into the Hospital Lariboisière in a condition of profound prostration. He stated, after much questioning, that he had urinated without any difficulty up to ten days before, but since that time he had not been able to urinate at all, although he had lost considerable blood by the urethra. Several attempts at catheterism had been made unsuccessfully during that time. The bladder was greatly distended, and was relieved of its contents by aspiration, after another attempt at catheterism had failed. It was found that there was an impermeable stricture in the membranous urethra, and that something grated upon the sound as the instrument was passed along the urethra. The urine was bloody and ammoniacal. The patient felt very cold, was drowsy; the tongue was dry. Rectal touch did not discover hypertrophy of the prostate nor tumor of the *bas fond*. The condition of the patient gradually grew worse, although the vesical puncture was performed twice daily. The patient finally became comatose, and died on the fourth day after admission. Upon examination, the urethra was found to have a deposit upon its mucous membrane, throughout its entire length, of a thin, yellowish layer, firmly adherent to the subjacent tissues, which under the microscope was found to consist of ammonio-magnesian phosphate. The stenosis was found at the place of election in the mem-

branous urethra, where the tube was completely torn by the efforts at catheterism. The bladder was soft and friable at certain places. The ureters were a little dilated, and also the pelves of the kidneys, which were very much congested. The liver was fatty.—*Le Progrès Médical*, No. 32.

TREATMENT OF ULCER OF THE STOMACH.—The treatment of gastric ulcer by lavage, or washing out the stomach, having been sometimes followed by hæmatemesis, M. Debove has advocated a new plan, in which this expedient is rendered unnecessary. The object of the treatment is to suspend entirely gastric digestion by means of large doses of sodium bicarbonate with the food, which is restricted to powder of beef (beef powder, 25 G.; sodium bicarbonate, 10 gr.), given three times a day (on account of the taste it is desirable to use a tube in administering the food), the patient also taking a couple of pints of milk daily. Under this treatment two grave cases, accompanied by atrocious attacks of pain, hemorrhage, and profound emaciation, which resisted other treatment, were rapidly cured. The reporter adds that no bad results have followed the comparatively large doses of alkali in any of the cases.—*Le Progrès Médical*, No. 28.

TREATMENT OF DIPHTHERIA WITH VAPORS OF CRUDE TURPENTINE AND NORWAY TAR.—Dr. E. Masson reports a case of diphtheria treated successfully by Delthil's method,—i.e., keeping the patient constantly in an atmosphere impregnated with vapor of coal-tar and turpentine, produced by throwing these agents on hot coals. Not having coal-tar, Dr. Masson substituted Norway tar and crude Venice turpentine. The two were mixed in equal proportions, and were placed in the same receptacle over an alcohol lamp. The vapors immediately commenced to come off, and the fumigation was kept up day and night until the child, 5 years old, recovered, after more than eight days' illness. The good effects were not very evident until the fourth day, when the false membrane disappeared; but the fumigation was kept up for five days longer, when treatment was finally discontinued. Although iron and potassium chlorate were used conjointly, the author attributes the favorable result mainly to the tar and turpentine.—*Rev. Méd. de la Suisse Romande*.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 6, 1884.

EDITORIAL.

CROWNER'S QUEST LAW.

IN the case of strychnine-poisoning which we referred to in a former issue, where a young girl lost her life in this city from taking pills on a banter, the deputy-coroner has ordered the arrest of the druggist's assistant who dispensed the prescription, because he had not put a "poison" label upon it, and has held him under two thousand dollars' bail to appear at court.

The law of Pennsylvania (Act of Assembly of March 31, 1860) under which the deputy-coroner was acting, and which he doubtless thought justified the extraordinary step he has taken, reads as follows:

"No apothecary, druggist, or other person shall sell or dispose of, by retail, any morphia, strychnia, arsenic, prussic acid, or corrosive sublimate, except upon the prescription of a physician, or on the personal application of some respectable inhabitant of full age of the town or place in which such sale shall be made, and in all cases of such sales, the word 'poison' shall be carefully and legibly marked or placed upon the label, package, bottle, or other vessel or thing in which such poison is contained; and when sold or disposed of otherwise than under the prescription of a physician, the apothecary, druggist, or other person selling or disposing of the same shall note, in a register kept for that purpose, the name and residence of the person to whom such sale was made, the quantity sold, the date of such sale; any person offending therein shall be guilty of a misdemeanor, and, on conviction, be sentenced to pay a fine not exceeding fifty dollars."

It would seem to be evident enough to any unprejudiced mind that this law is merely meant to restrict the sale of poisons at retail, and was not designed to

hamper physicians in the practice of medicine by frightening timid patients. If every package of medicine containing any of the above-mentioned ingredients were required by law to be labelled "poison," the very excess of caution would render it nugatory, because the warning label would be so common as no longer to attract attention. Moreover, unless the provisions of the law were made to include patent medicines and remedies dispensed directly by physicians, it would unjustly discriminate against those who send their prescriptions to drug-stores, and thus work an injury to both physicians and pharmacists. In short, if strictly carried out, it would entirely break up the prescription business of the druggist and reduce him to the position of a vender of nostrums and notions, and the physician, in self-defence, would be obliged to dispense his own prescriptions.

It is a bad wind that blows nobody any good: so, if this case is carried to court, as it should be, it will have the incidental advantage of eliciting a judicial decision as to the intent of the law, which, if subject to the construction given by the deputy-coroner, should be amended or repealed at the earliest moment possible.

Perhaps the case may also serve to direct public attention to the fact that the ancient coroner system has been outgrown by the community, and that the adoption of the medical examiner system, such as has been in successful operation in Massachusetts for several years, or the French system of having a chief coroner for the State, who shall be a physician and not a politician, is now imperatively demanded in the interest both of justice and of science.

SCHUYLKILL WATER.

ACTIVE measures at last have been instituted against the mill-owners and others who make the Schuylkill the depository of refuse and filth, the district attor-

ney having entered writs against them for maintaining a nuisance.

It is certainly right and proper that the water-supply of Philadelphia should be kept as pure as possible, and especially that it should be kept free from sewage-contamination. The evil is great enough, therefore, to warrant the agitation of the subject by the public press, although, in reality, the health of the city does not appear to sustain the statements regarding the extreme unwholesomeness of Schuylkill water, the death-rate of Philadelphia being the lowest of any large city in the world. The fact that water exposed to the air absorbs a large quantity of oxygen enables a large river to oxidize as well as to dilute organic matter to a point where it is comparatively harmless. The sewage that is discharged into the Schuylkill at Manayunk and above that place is probably more objectionable sentimentally than in fact. But there is another dangerous pollution to which our drinking-water is exposed, which has not received sufficient consideration, and which an intercepting sewer will not correct.

A number of years ago, attention was called to the fact that Laurel Hill Cemetery, on the east bank of the river, was becoming so crowded as to menace the purity of the water-supply of the city. A commission was appointed to examine into the subject, which reported that, by a beneficent provision of nature, the rocky strata underlying the graveyard were inclined away from the river, so that the drainage was diverted into another channel. This explanation was considered satisfactory at the time, but, since then, West Laurel Hill Cemetery has been opened on the *west* side of the river. Now, unless the strata dip in different directions upon the opposite sides of the river, the drainage from at least one of these burial-grounds will ultimately find its way into the reservoirs at Fairmount, especially after a heavy rain.

The researches of Selmi and others into the poisonous character of ptomaines, the alkaloids found in dead bodies, are sufficient to show the unwholesome character of such drinking-water, quite apart from the danger of its containing typhoid or other disease germs. Dr. Hardman* reports recently the death of a young girl, thirteen years of age, and the serious, though not fatal, illness of her sister, they having drunk from a spring coming from the foot of a hill which had long been used as a burial-ground. These patients both exhibited symptoms of blood-poisoning, with numerous abscesses. Another sister, who drank of the water some time before, had had a long illness resembling typhoid fever, but without any abscesses. It is said that when cattle used this water they were also made sick by it.

Comment on these cases is unnecessary, and the application is very obvious. To remedy existing evils, it seems evident that Philadelphia should seek a water-supply farther from such sources of contamination as have been named, and one over which she can exercise full control.

WE have noticed that some of our exchanges, in quoting from this journal, have not given its full title. To avoid confusion, we would beg that, whenever possible, this may be done by those who honor us by making abstracts from articles in these columns. Sometimes, of course, it may not be convenient or necessary to do so. For instance, the *Medical News* of last week gave an editorial abstract of a valuable paper by Dr. Pyle, and omitted to state that the original article appears in full only in the *Philadelphia Medical Times*, supposing that its readers are sufficiently intelligent to read the *Times* for themselves. In such a case, of course, any detailed reference would be entirely superfluous.

* The Atlanta Medical and Surgical Journal, August, 1884.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE British Medical Association has held its annual meeting this year at Belfast, among the Orangemen. Despite this fact and the known combativeness of Orangemen, the meeting was not characterized by the tumult which took place at the Liverpool meeting; nevertheless, all was not quite peace. The members were welcomed by Prof. James Cuming, the President-elect, who gave the opening address. Ulster, he said, was glad to have them as her guests. After giving a few data about Belfast in its sanitary aspect, he plunged into his address, and dealt first with micro-organisms. From these he proceeded to discuss "The Control of Pathological Research by Clinical Observation." He very truthfully observed, "A great deal of medical literature is founded on hospital practice, which, valuable as it is, wants the element of time. The floating population of hospitals passes rapidly from observation; and it is only from the medical men who have known patients for years, and often the stock from which they come, that we can get information which necessarily presupposes continuous observation spread over long periods." This enables them to recognize the difference between families, just as there is a difference betwixt nations. Velpeau said, in reference to the mortality of his operations, "The flesh of a Frenchman is not that of an Englishman." Changes, too, have passed over us. There is much less endemic disease than there used to be. He also held that a change has come over us,—if not "a change of type in disease," at least "a change of epidemic constitution," a matter all experienced observers seem to agree about. He then proceeded to discuss "symptoms," and held there was a tendency at present to regard disease too exclusively from an anatomical point of view. He quoted what Prof. Virchow said three years ago: "How has it come to pass that symptomatology has entirely lost the high position in which it stood little less than a generation ago, to such extent that in most universities it is no more taught as a specialty? Have symptoms no more any importance for the physician? Can a diagnosis be made without a knowledge of symptoms? Certainly not!" Prof. Cuming may seem antiquated to some when he said, "Medicine teems with instances in which anatomical change alone would lead us very far from the result which clinical observation indisputably establishes; and there is no lesson which experience teaches a physician more decisively than that it is not the extent or degree of an inflammatory affection which furnishes the most accurate measure of

its danger or the most reliable indications for its treatment. Indeed, in dealing with many cases of disease, our question is not, Where is it? but, What is it? Is it gout, or syphilis, or malaria? and so on." This is good solid talk; the practice of physic is not mere physical examination plus testing the urine, though these are essential factors. Irish medicine, he asserted, had always taken the broad view of matters, quoting the late Prof. Stokes: "So far as medical experience goes, we are forced to admit that the foundations of the healing art must rest on another, if not a broader, basis than that of anatomical and of chemical changes in disease." He thought clinical evidence has been overborne by pathological theory in several directions. After referring to tubercle, he said, "In fact, while we ought to welcome every new method of investigation, while we ought to do nothing to discourage the boldest flights of pathological speculation, to us the crucial test must always be the clinical one, the facts drawn from the direct observation of morbid processes during life. And, in spite of any pathological generalization or anatomical induction, we must hold rigidly to our clinical facts, and decline to allow them to be warped and strained in the slightest degree." In short, he insisted that we must know something of our patients before our final interview with them in the dead-house. And if our profession exists for the benefit of suffering humanity, and not merely for our own benefit, it is impossible to disagree with him. The address in Medicine was delivered by Dr. William Ord, physician to St. Thomas's Hospital, who has made a study of the subject of his address, "On some Disorders of Nutrition related with Affections of the Nervous System." The first matter he discussed was the "Muscular Atrophy produced by Joint-Disease," giving some cases from Charcot. Then he spoke of "Chronic, Rheumatic, or Rheumatoid Arthritis as the Work of Nerve-Irritation;" then of "Joint-Lesion in Progressive Muscular Atrophy;" then of "Muscular Wasting coexistent with Joint-Disease," "Articular Dystrophy brought about by Irritation of Spinal Cord," "Observations of Senator and Others on the Nervous Production of Arthritis." "Digitorum Nodi" were next spoken of, in which he pointed out how nodosity of the joints ran along with marked hyperæmia of the os and cervix uteri. "Gonorrhœal rheumatism" was a term which he thought not nearly so good or so happy as Ricord's "blennorrhagic arthritis." He then related a case where a gentleman liable to gouty urethritis, without specific taint, had a sharp arthritis along with it. He spoke after that of "Neurotic Dystrophies of Secretion," and then of "Glycosuria in Relation to Nerve-Influence," on which he said, "As regards the onset of true diabetes, the frequent antecedence of great emotional disturbance of the central nervous system has

been recognized by general consent." He pointed to "gout and glycosuria" as often found together, and then to "Acute Inflammation of Diabetes and Nerve-Influence," concluding appropriately with "The Nervous Relations of Myxœdema," a disease with which his name is linked. The address in Physiology was delivered by Prof. Redfern, of Belfast, in which he dealt with "Progress in Physiological Science." He discoursed largely on lymph-spaces. In speaking of the liver he termed it "the largest living mass of protoplasm in the body; at one period employed in the production of blood-corpuscles, and then half the weight of the body. Originally formed upon the vitelline veins, and subsequently transferred to the umbilical and then to the portal veins, as each in turn becomes the recipient of the food-supplies, there can be no doubt that, whilst its function is mainly to make and maintain the blood, its method of action still involves great physiological secrets." Then he said, "The importance of the physiological arrangement by which the lung is irrigated by lymph from the pleural to the vesicular and bronchial surfaces has, I think, not been sufficiently appreciated." Finally, he reviewed the evidence as to how far other diseases than smallpox may be rendered less virulent by vaccination.

In the Obstetric Section the address was given by Dr. Kidd, of Dublin, who selected as his topic "Puerperal Fever," which he handled in a very complete manner. He thought it often showed itself in private practice before breaking out in hospitals.

In the Surgical Section the opening address was delivered by Sir William McCormac, the surgeon to St. Thomas's Hospital, so well known in connection with military surgery. He selected for his topics "Gastrostomy," "Radical Cure for Hernia," and "Thyroidectomy." In speaking of gastrostomy, he pointed out how great was the relief experienced by the patient on the operation being performed,—a matter which doubtless had a great deal to do with the patient's prospects after it. He regarded modern experience as justifying the operation of gastrostomy when the œsophagus is closed by a malignant growth. It is not well or wise to allow the patient to sink too low before resorting to the operation. Then he spoke of the removal of the thyroid gland,—an operation which is meeting with more approval than it once experienced. Dr. Clement Godson, assistant obstetric physician to St. Bartholomew's Hospital, gave the opening address in the Obstetric Section on "The Surgical Aspect of Obstetrics and Gynæcology." He protested against the view that the obstetrician should not "dabble in surgery;" he said that operations should not be forbidden to obstetricians, as they were by the rule still in force, even at his hospital, as he

was liable to be censured if he removed a small vascular caruncle from the female urethra. This rule was objectionable, in his opinion. In the Section of Public Medicine Dr. Charles Cameron, M.P., discussed "The Cholera Microbe, and how to meet it." He thought Dr. Budd was right when he said sanitation by anticipation was the way to meet cholera,—“to be beforehand with the poison.” Thorough disinfection of all sewerage was to be accomplished with “sulphate of iron in the drains lying in wait for the poison.” Trap the microbe in a disinfectant, in plain English,—probably a very proper fate for the minute miscreant. In the Psychological Section, Dr. Savage, of the Bethlehem Hospital, gave a very interesting address upon "The Pathology of Insanity." He said, "The period of accumulation—the time of making fact-heaps—is not the period of highest culture, but it is a necessary period. The bricks must be made, and the rocks hewn from solid and resisting nature, before any secure and sheltering edifice can arise." He went on, "The time is not far distant when the terms *mania*, *melancholia*, and *dementia* will be merely used as are the words headache, vomiting, and albuminuria, referring to symptoms and not to diseases. I think diabetes, for many reasons, is comparable to insanity. Like it, the causation is doubtful. Like it, being a symptom, it is often taken for a disease." He thinks, too, "cases of insanity will be divided, first of all, into those where there is disorder of function, and, secondly, those where there is disease of the organ as well as disorder of function." He spoke strongly on the association of locomotor ataxy with general paralysis. He says of the latter malady, "That the cases in which syphilis has occurred suffer with symptoms of lateral sclerosis and mercurial tremor, suggests the idea that mercurial treatment might have something to do with the production of the symptoms. It is a thing to be considered, and the pathology may possibly be this, that the syphilis has impaired the nervous system, but the mercury has defined the lines along which the break-down is to occur." In referring to brain—"dissolution," as Hughlings Jackson terms it, he said, "Recently there was a patient in Bethlehem who for nearly a quarter of a century had kept a skeleton buried in his breast, a sad and burning wrong,—one he dared not trust to any one,—one affecting the honor of his name and of his children; no ray of light was ever allowed to enter the dark closet, till age, weakening and destroying the containing parts, exposed the skeleton in all its hideousness to every passer-by. His mind resembled a geological denudation: the past long buried was re-exposed." His address is one of the most interesting of them all.

Then there followed discussions on stated subjects, Prof. George Johnson, of King's

College, opening that on albuminuria, a subject with which his name has been associated for many years. He was followed by Dr. Balthazar Foster, of Birmingham, and others. It is impossible to give the lines of the discussion, but it may be stated that the old position that albuminuria necessarily means Bright's disease is rapidly being undermined, and that now it is being generally recognized that it is much easier to find albumen in the urine than to say what it means when found. Certainly it is most unnecessary in many cases to give it its worst significance. But what significance has it? asks the reader. A very natural question to ask; but it is sometimes easier to ask questions than to answer them. And each case of albuminuria has its own features; only, remember, the lineaments are not necessarily those in kidney-diseases. That, as Prof. Johnson insists, albuminuria has a grave significance at times, is certain enough. In the Surgical Section there was a discussion on the treatment of spinal curvatures, introduced by Lewis Sayre, of New York. Enthusiastic as Sayre is, with his heart in the subject, convincing as are his arguments, especially the results of his practice, the Britisher is intensely conservative and the impression made on his mind is readily effaced. Consequently, Sayre's work soon slips out of mind, with many, with, it must be admitted, untoward results to the patients of the oblivious doctors. Some good men, including the rising surgeon Charles B. Keetley, took part in the discussion. In another Section the subject under discussion was pulmonary emphysema; but the method of its production is of comparatively little value by the side of its consequences. In young people emphysema (vesiculare) is often largely compatible with the restoration of the affected portion of lung to a normal state; but in older persons the mischief once done usually remains, with little improvement. Prof. Gairdner, of Glasgow, spoke on the subject. This time a new Section appeared, under the presidency of Dr. Thomas MacLagan, of London,—viz., a Section devoted to pharmacology and therapeutics. The subject of interest here was the methods of therapeutic research, experimental and clinical. In Ophthalmology the treatment of immature cataract was discussed. Of course the tee-total element was in strong force. The late Samuel Bowley for years past has given a breakfast to the members of the Association and had a discussion on alcohol afterwards. Of late the tendency has been not so much to hear what the medical profession had to say on the matter, as to address the assembled members on a tee-total propagandism. Once more the anti-alcohol advocates aired their views, to their own satisfaction at least. Then there was a new feature: each morning early there was something to see by those who were willing to rise. One morning it was a drive, another a visit to a

magnificent new ship. Of course, for those who have the energy, the strength and spirit, for such extra exertion, such early morning excursions are very enjoyable. But for hard-worked men on a holiday the Association week is hard enough, without any new demands upon the powers. That the Ulster men were hospitable goes without saying. That the dinner was a success is pretty certain. It is equally certain that a great deal of mutual admiration among those present might be expressed in the after-dinner speeches.

One thing certainly is of good omen, and that is the election of Dr. Balthazar Foster to the post of President of Council, the real working office of the little republic. Dr. Foster is one of the leading reformers in the Association, and his election means a further development of the power of the British Medical Association in a good and useful direction. Already it is getting strong in numbers and financially. It can pay its way, put by some savings, and yet encourage useful scientific work,—a contrast with its hard-up state of comparatively few years ago.

It is reported that some disparaging remarks were made about the inability of the Association to help the profession to anything it wants, and the break-down of the Medical Amendment Bill, which has once more followed its old fate,—to be given up, partly because the profession counts for nothing with politicians, not daring to assert itself, and partly because it is divided against itself, and its mischievous corporations refuse to die. But a consciousness that things are improving will encourage the different members of the profession to band together to get something done, and the Association is developing in strength and in energy. It is still waxing, and, when growth is ceasing, functional activity will follow; but growth is still actively progressing with it.

Then there were festive entertainments,—no small part of the annual gathering. There was the President's *conversazione* on the Wednesday evening, and on the Friday afternoon a reception by the mayor of the town in the Botanical Gardens, while on Saturday, as usual, there was no pretension of work: it was a "whole holiday" in earnest. Some went to the Giants' Causeway, by the electric tramway partly, while others went journeys along the coast in different directions,—all thoroughly enjoying the Irish scenery and the Hibernian welcome which met them on all sides. Whatever the Association may or may not do, it certainly does bring the different members of the profession from widely different parts together, so that an element of personal acquaintance is leavening the mass, which cannot be without its utility when the day comes that the profession dare demand from the public and the governing powers that position which it ought to have, and which it does not yet have accorded to it,—to

a great extent because it does not assert itself, collectively and individually, as it ought to do, and which it will not get until it dare do so.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a meeting held June 11, 1884, W. H. Webb, M.D., read a paper entitled

REASONS FOR BELIEVING IN THE CONTAGIOUSNESS OF PHTHISIS.

The germ theory of disease is by no means a new theory. One of its earliest advocates was Athanasius Kircher, a learned German Jesuit, who lived in the early part of the seventeenth century; and about the same time lived Robert Boyle, an eminent Irish philosopher, who believed in the truth of this theory. The renowned Linnæus, the father of botany, was not only an ardent investigator of its claims, but published several memoirs in its support. In the latter part of the last century it had such supporters as Sir John Pringle and Dr. William Farr, and in the early part of the present century it had such advocates as Sir Henry Holland, Schönlein, Cagniard de la Tour, Schultze, and many others.

To the illustrious Pasteur, however, belongs the distinction of having done more than any of his predecessors to develop this intensely interesting and important subject, and of presenting its truths in such a way that they have become of immense practical use to mankind. His indefatigable labors, the ingenuity and exactness with which he pursued his investigations, the practical demonstrations he has given of the utility of the truths he has discovered, are well known to men of science. This special field of investigation is now occupied by many able and accurate observers, and as a result of their labors the present generation may witness an epoch in the history of medicine, startling in its brilliancy of grand achievements in subjugating disease; when men shall hold in their hands effective weapons and be enabled to erect impassable barriers before those destructive scourges,—cholera, yellow fever, and tubercular phthisis. But two years ago the medical profession was startled by the announcement made by Robert Koch,* of Berlin, that "Tuberculosis is a specific infectious disease, caused by a specific micro-organism, the bacillus tuberculosis, which constitutes, in fact, the tubercle-virus." Truly, since the time of the immortal Jenner we have not had such a remarkable statement, nor one so weighty in its import.

There is no reason to wonder why medical and other scientific bodies, the world over, have this subject so frequently under consideration.

The work of Dr. Formad, of this city, as well as the work of all other investigators in this field of research, has seemed to confirm the statements of Prof. Koch. There is nothing more seductive than speculation regarding the outcome of their future labors, of the truths which shall belong to those who will follow us, and of the beneficent power these truths shall arm them with.

But it is only hard and intelligent work that can make this future a reality; and I am persuaded that the frequent discussions by our Society, of points connected with the study of germs as a cause of disease, will do much good, by stimulating the efforts of those members who are engaged in such investigations, and by enabling others who are interested in this work to make suggestions or offer criticisms that may be of some advantage to them.

In my paper this evening I purpose to limit myself to answering in the affirmative a question of great practical importance propounded by Dr. Formad in his recent paper,—namely, "Is Consumption Contagious?" Dr. Formad is disposed to answer it in the negative, and offers to you the names of a number of eminent physicians who apparently lend strength to his doubts concerning its contagiousness. For a number of years I have carefully studied this disease, and as a result of my observations I am firmly convinced that it is contagious. Indeed, the contagious character of the disease is generally believed in, and is taught by the most able and experienced clinicians of our day.

When a disease is unusually prevalent, it is very natural to suppose that it may be due to contagion or infection. Think, for a moment, of the ravages from tubercular phthisis. It exists in all climates; it affects all classes of people; it respects neither age nor sex. It claims about twenty per cent. of the death-rate of the civilized world. The mortuary lists of our own city show a percentage in its favor amounting to about fifteen and a half, and the native population of those latitudes most frequented by consumptives succumb to this dire disorder as frequently as people do elsewhere, except, perhaps, Colorado. Is this to be accounted for by heredity or pre-existing lung-trouble? If the disease was due to inheritance alone, it would have become obliterated generations ago by a species of natural extinction; but the disease is increasing in a greater ratio than the increase of population, which shows that the disease *must be acquired afresh*.

Dr. Formad, in his valuable paper, makes the statement that, "According to the observations of the most prominent clinicians who have paid special attention to this matter,

* Die Etiologie der Tuberculose. Berliner Klin. Wochenschrift, 1882, No. 15.

there is not a single authenticated case of tuberculosis as a result of contagion on record." This assertion is not tenable, since cases are recorded by C. B. Coventry,* S. G. Morton,† Daniel Drake,‡ Tauchard,§ H. I. Bowditch,|| Vialettes,¶ Bergeret,** Hardy,†† Seux,‡‡ Condie,§§ L. Tait,||| Stevens,¶¶ Bernard,*** Chamontin,††† Hermann Weber,††† Flint, Sr.,§§§ Holden,|||| Reich,¶¶¶ Da Costa,**** Booth,†††† Bryan,†††† and many others. Is this not sufficient evidence that such cases are recorded? The fact that some of these names are better known than others does not militate against the honesty and care exercised by the less distinguished observers; and their deductions are justly entitled to a fair consideration. Obscurity does not by any means imply ignorance, or lack of ability and keen perception.

Dr. Formad also asserts that "Among scores of experienced men who deny thus the contagiousness of tuberculosis, it is sufficient to mention the names of Virchow, Recklinghausen, and Stricker, in Germany; Gull, William Watson, Paget, Humphry, and Richardson, in England; Bennet, in France, and Hiram Corson and Traill Green in our midst,—all men of close observation, with ripe experience extending over from thirty to fifty years." I also take exception to this statement, for Drs. Corson, Bennet, and probably many others mentioned in Dr. Formad's list, if heard from to-day, would not subscribe to this declaration, which finds fewer supporters than one might imagine to be the case. Some time ago I received a letter from Dr. Corson, in which he said, "Long since I advised my patrons not to have young daughters, who were compelled to wait on a consumptive mother, sleeping in the same room with the patient." This certainly shows that while Dr. Corson may not be a thorough convert to the contagion theory, yet he thinks it prudent to resort to preventive measures, by securing as much separation as possible of the well from the phthisical individual. And Dr. Bennet, who is also quoted by Dr. Formad, records

the following typical case of contagion in his work:§§§§

"A strong, healthy, well-made husband, age 27, with no hereditary or constitutional taint or weakness, came over from Australia—a four months' journey—in the same cabin as his wife, who was in the last stage of suppurative phthisis. She died soon after her arrival in England, and he came to Mentone that winter a confirmed consumptive, dying himself subsequently. He was perfectly well when he stepped on board of the vessel at Australia, but in a small confined cabin breathed for months an atmosphere loaded with pus-particles thrown out of the suppurating cavities of his wife's lungs, possibly to his destruction."

After referring to the inoculating experiments of Buhl, at Munich, he makes the following statement: "But, in the face of the results that these researches have brought to light, *it seems to me impossible to deny that it may be communicated to the healthy by breathing constantly air saturated with the purulent secretions of advanced phthisis.* This is an all-powerful argument [I am still quoting Bennet] for the free ventilation of rooms occupied by the consumptive, for the sake of those who attend them and live with them, as well as for their own. In a confined atmosphere they probably poison themselves by their own fetid breath, and extend disease to the healthy regions of the lungs."||||| Can this be used to confirm the belief of Dr. Bennet in the non-contagiousness of phthisis, or is it evidence in support of the position I take? This is but one of many similar cases quoted by various authors, who are scarcely willing to commit themselves, while the evidence is so striking that they, like Dr. Bennet, feel constrained to express the possibility of a contagious element in their causation.

"Whatever has happened is capable of happening again: the only question relates to the condition under which it happens."¶¶¶¶ And what are the conditions under the present circumstances? This is exemplified in the following case, very similar to the one narrated by Dr. Bennet:

"A lady, about 30 years of age, the wife of an officer in the army, left Calcutta with her husband to go by sea to Southampton. At the time of leaving Calcutta *she was in robust health*, whilst he was in an advanced stage of consumption. They had a single close cabin, and she performed all the duties of a nurse for her husband. The weather was stormy, and the hatches were more than once battened down. The husband died off the Cape, and was buried at sea. About three days later the lady arrived at Southampton. I was

* U. S. Med. and Surg. Journal, New York, 1835, p. 392.

† Illustrations of Pulmonary Consumption, Phila., 1837, p. 80.

‡ Principal Diseases of the Int. Val. of North America, Phila., 1854, p. 915.

§ Thèse de Paris, 1860, p. 37.

|| Boston Med. and Surg. Journal, 1884, p. 329.

¶ Thèse de Montpellier, 1866, No. 44.

** Annales d'Hygiène et de Médecine légale, 1867.

†† Bulletin de l'Académie de Méd., 1868, p. 348.

‡‡ Le Marseille Médical, 1869, No. 4, p. 310.

§§ Am. Journ. of the Med. Sciences, July, 1871.

||| Ibid., October, 1871.

¶¶ Boston Med. and Surg. Journal, 1872, p. 168.

*** Thèse de Montpellier, 1872, No. 46.

††† Ibid., 1874, No. 22.

†††† Clinical Society's Trans., London, 1874, vol. viii. p. 144.

§§§§ On Phthisis, Phila., 1875, p. 419.

¶¶¶ Am. Journ. of the Med. Sci., July, 1878, p. 145.

¶¶¶¶ Reynolds's System of Med., Am. ed., 1880, vol. ii. p. 116.

**** Am. Journ. of the Med. Sci., April, 1878.

†††† Trans. of Southern Illinois Med. Assoc., 1879.

†††† London Med. Record, 1880.

§§§§ On the Treatment of Pulmonary Consumption, Phila., 1879, p. 51.

¶¶¶ Ibid., p. 53. (Italics mine. w. H. W.)

¶¶¶¶ J. S. Mill, System of Logic, 9th ed., London, 1872, vol. ii. p. 144.

called to see her professionally. I found her with both lungs stuffed with tubercles, and she died in about six weeks afterwards. The painful duty was cast upon me of acquainting her with her condition, which I did, when she said, 'Impossible! I was never better in my life than when I stepped on board at Calcutta.' I knew the lady well, and all her family, and there was no hereditary predisposition. In this case all the necessary conditions for the propagation of the disease were fulfilled; *a high temperature* in a close, ill-ventilated cabin, where the exhalations from the diseased lungs were inhaled by the sound lung, with the wellnigh inevitable result I have described.*

Were these the only cases, we would think our point sustained. There are, however, but few physicians in our large cities who cannot recall cases in which they would rather commit themselves to a belief in the contagiousness of consumption than to ascribe its cause to anything else.

The following cases, due to contagion, have been communicated to the writer, and are worthy of record:

Dr. J. Solis Cohen has kindly furnished me with the following case:

"More than ten years ago, Dr. H., of this city, sent me a young female from the country in advanced phthisis, much emaciated, with aphonia from pressure of consolidated apex on right recurrent nerve. I gave her little encouragement, and sent her home with some general instructions. Some two years later she called on me, asking me if I remembered the last words I said to her; I did not, but she repeated them: 'Your best chance is to take cod-liver oil, live on it if you can, eat it with your bread, with anything.' She went home much depressed, became bedridden for a number of weeks. She subsequently married, her husband acquired phthisis, and died of it, and she was still living three or four years ago, with consolidated apices and cicatrized cavities."

Juan B. Mears, of Monterey, Mexico, communicates to my friend Dr. A. C. W. Beecher, of this city, the following case:

"A woman, suffering from the last stages of consumption, who, some year or two before, had adopted a girl. The latter's mother, Mrs. H., questioned me about the safety of letting her daughter remain with the afflicted person. I examined the girl, and found her strong and healthy, tall and well developed for her age (about 16 or 17 years old), without any hereditary predisposition. I told her that I feared no danger to the daughter if she would only take some ordinary hygienic precaution. Well, the old lady died, and a few months afterwards Mrs. H. brought the girl to me, already with an as acute phthisis as I ever saw, and she died too. Questioning

them about the case, they attributed the malady to the companionship of the old woman; they slept in the same bed, ate from the same dishes, breathed the same air, infected, probably, by the phthisical débris. I must add that the people here believe in the actual contagiousness of phthisis."

The following case occurred in my own practice, and is also worthy of record:

October 7, 1880, I was requested to attend professionally Mr. H. F., aged 52 years, who had been ill for one year with phthisis. He died September 23, 1881. During all of Mr. F.'s illness he was most carefully nursed by his wife, who occupied the same room constantly; she contracted phthisis, and died August 3, 1882, aged 50 years. Mrs. F.'s mother died twenty years previously of phthisis; her father died at the age of 56 of cancer.

I may be permitted, in view of the few eminent names offered by Dr. Formad in support of his theory, to mention the names of a number of men of equal practical experience in medicine, who have recorded their belief in the contagiousness of the disease: Aristotle,† Galen,‡ Riverius,§ R. Morton,|| Baumé,¶ Cullen,** Heberden,†† Darwin,‡‡ Coventry,§§ S. G. Morton,||| Bright and Addison,||| Dunglison,*** Andral,††† Drake,††† Sir T. Watson,§§§ Copeland,|||| Dickson,¶¶¶ W. Budd,**** L. Tait,†††† Walshe,†††† Madden,§§§§ De Mussy,||||| H. Weber,¶¶¶¶ Holden,***** Da Costa,††††† Rühle of Bonn,††††† Lichtheim,§§§§§ Klebs,||||||| Bollinger,¶¶¶¶¶ Flint,***** and many others could be mentioned.

† Practical and Historical Treatise on Consumptive Diseases, by T. Young, M.D., London, 1815, p. 15.

‡ Paulus Ægineta, Syd. Soc., 1844, vol. i. p. 286.

§ Practice of Physic, London, 1668, p. 170.

|| Phthisiologia, or a Treatise on Consumption, London, 1604, p. 67.

¶ Phthisis Pulmonaire, Montpellier, 1789, vol. i. p. 189.

** Practice of Medicine, Edinburgh, 1790, vol. ii. p. 390.

†† Commentaries on the History and Cure of Disease, London, 1802, p. 375.

‡‡ Zoönomia, Philadelphia, 1818, vol. i. p. 311.

§§ U. S. Med. and Surg. Journal, New York, 1835, vol. i. p. 389.

||| Illustrations of Pulmonary Consumption, Philadelphia, 1837, p. 80.

|||| Elements of the Practice of Medicine, London, 1839, vol. i. p. 294.

**** Practice of Medicine, Philadelphia, 1844, vol. i. p. 365.

††† Notes to Laennec's Treatise on Auscultation, edited by Herbert, London, 1846.

†††† Principal Diseases of the Int. Val. of North America, Philadelphia, 1854, p. 915.

§§§ Principles and Practice of Physic, London, 1857, p. 217.

||||| Dictionary of Practical Medicine, New York, 1859, p. 1228.

¶¶¶ Elements of Medicine, Philadelphia, 1859, p. 625.

***** The Lancet, 1867, vol. ii.

†††† Amer. Journal of the Medical Sci., 1871, vol. ii.

†††† Diseases of the Lungs, London, 1871, p. 452.

§§§ Dublin Journal of Med. Sci., vol. xl. p. 33.

||||| Brit. and For. Med. and Chir. Rev., April, 1870, p. 520.

¶¶¶ Clinical Soc. Trans., London, 1874, vol. viii. p. 141.

***** Amer. Journal of the Med. Sci., July, 1878.

†††† Ibid., April, 1878.

†††† Medical Record, New York, May 19, 1883.

§§§ Ibid.

||||| Ibid.

¶¶¶ Ibid., March 22, 1884.

***** Medical News, Philadelphia, Jan. 19, 1884.

* Brit. Med. Journal, 1883, vol. i. p. 21.

Dr. Formad lays great stress upon the fact that the medical officers and attachés of the Brompton Hospital have not contracted phthisis. This would be the last place in the world to look for the disease as the result of contagion, for every one knows who has visited that hospital that hygiene and regimen are most scrupulously carried out to the highest point of excellence known, the nurses and other attachés being on duty only a portion of the twenty-four hours, and when on duty are not constantly in the wards. Compare this with the manner in which patients are cared for in private practice. The nurse, a member of the family or a friend of the stricken individual, generally occupies the same room, day and night, more especially in the advanced stage of the disease, and the hygiene and regimen do not, except in a few instances, receive proper attention; in some cases it is wholly neglected. Every crevice about the windows, and sometimes even the key-holes, as I have more than once seen, are plugged up, for fear a little fresh air might get into the room and the patient "take a cold."

As a rule, the nursing of the phthisical in private practice is unskilled, and the circumstances under which the nurses perform their office render them more liable to fall victims to the disease. Cases of phthisis due to contagion have, nevertheless, occurred at Brompton Hospital, for Walshe* makes the following statements in regard to his assistants:

"Curiously enough, of the first three clinical assistants I had at Brompton, two died of phthisis, and the third left the establishment with slight hæmoptysis, cough, and chest uneasiness. The latter is now (1871) in perfect physical condition; one of the former had clearly been affected before he came to the hospital; the other was a model of sturdy health when he took the office."

He says further,—

"... I must confess my belief in the reality of such transmissibility has of late years been strengthened. I have met with so many examples of the kind that 'coincidence' becomes itself an explanation difficult of acceptance. I have, besides, in three instances seen a robust husband become distinctly and actively phthisical, as shown by general and local symptoms and physical signs, and, on the death of his phthisical wife, whom he had closely tended, fall into the retrogressive stage of the disease, and ultimately practically recover."

Hereditary influence in producing the disease is not as great as many believe, and all efforts have failed to prove by statistics the existence in a majority of the phthisical of an unfavorable tuberculous family record. Walshe† says, "The final conclusion flowing

from the analysis of the family history of 446 persons is that *phthisis in the adult hospital population of this country is to a slight amount only a disease demonstrably derived from parents.*" "Of 374 cases occurring in old women at the Salpêtrière Hospital, reported by Piorry, 78 died without presenting any traces of tubercle, although their parents died from that disease."‡ Dr. Cotton, who analyzed 1000 cases at Brompton Hospital, found only 365 cases in which hereditary taint could be proved. Scott Alison's observations at the same institution show, in 603 cases, a hereditary influence in but 19. Walshe concludes, after most careful investigation, that not over 26 per cent. can be traced to hereditary taint. How, then, are we to explain the cause in the remaining, we will say, 60 per cent.? Are they to be traced to pneumonias, pleurisy, or kindred diseases? Or are we to conclude that there is a *specific poison* to which they may be exposed which produces this disease? I think there is,—in fact, there must be such a specific poison.

I will here give a hypothetical case, in order to show the fallacy of hereditary transmission of disease: A. B. is stricken with tuberculosis; the family are amazed at the announcement of the fact by the attending physician, and they state that the parents and grandparents are still living and enjoying good health. The family trace back to the third generation, and find that a great-grandmother died of phthisis, and this gives some satisfaction as to the disease being in the family. And if we go back three generations to find the cause for tuberculosis, why not go back four or five if nothing is found in the third? or, failing to find it in these, go back as far in the family history as tradition may extend, and, finding one ancestor who *probably* died of phthisis, to conclude that therefore the case we see is transmitted from that ancestor? This, to my mind, is absurd; and yet I know the tendency of family and physician (particularly the latter) to look for this in the transmission rather than in an acquirement in the individual *per se*. It is not sufficient to declare hereditary transmission, when even some of the children of phthisical parents, while partaking of their delicate constitutions (that is, delicate in figure and lacking ruggedness), will live to good round ages, and perish from other diseases.

I do not assert that exposure to the poison will produce the disease in all individuals any more than other zymotic poisons will, for there are many who are for the time at least insusceptible to their action, and this is owing to the fact that they present no proper nidus for the poison-germ, yet from this we are not to argue that the germ itself is less potent to an individual susceptible to it. The belief in

* Diseases of the Lungs, London, 1871, p. 459.

† Ibid., p. 462.

‡ Quoted by Dr. Durant, Trans. of the N. Y. State Med. Soc., 1871, p. 172.

the contagiousness of the disease is as old as its literature itself. As long ago as 1668, Riverius,* who for more than twenty-five years was professor of physic in the University of Montpellier, in speaking of the causes of phthisis, wrote as follows: "Moreover, there are external causes, as contagion, which is the chiefest; for this disease is so infectious that we may observe women to be infected by their husbands, and men by their wives, and all their children to die of the same, not only from the infection of their parent's seed, but from the company of him that was first infected. And this contagion is more easily communicated to those that are of kin; wherefore it is not safe for a brother or sister to enter into a chamber, for the *miasmata* or infective vapors, which come from their lungs and infect the whole air of the chamber, and being drawn in by others (especially if they are any way disposed to the same disease), beget the same disease in their lungs."

Not only among the members of our profession, but among all classes of people the belief is prevalent, especially in Italy, Southern France, Spain, Portugal, and Mexico. At the Canary Islands they look upon consumptives as little better than lepers, and they are kept in a species of quarantine, being subjected to many vexatious restrictions in regard to their intercourse with the indigenous population. This would serve to show that there must be some well-grounded reason for such belief, and it ought not to be regarded as superstition.

It is impossible to comprehend how a disease specific in its character and definite in its course can be transmitted from parent to child; how the germ comprising the complicated organism of man could develop from the microcosm into a highly complex creature, carrying with it the elements of destruction as a part and parcel of its structure. Such teaching is opposed to all known biological facts, and it seems that writers have fallen into the fashionable professional rut in searching for the etiology of many diseases, and in none more deeply than ascribing hereditary transmission, when in reality they should say an hereditary predisposition to certain diseases.

There are a number of authorities who hold the opinion that phthisis is transmitted from parent to offspring, and among the number is Sir William Jenner,† who states, "That tuberculosis is transmitted from parent to child, is one of the established facts in medicine." This is absurd. If the disease is transmitted, why does it remain latent for so many years? There is no such thing as the direct transmission of a tubercular virus from parent to offspring; this has been shown by such pathologists as Guizot, who, "in four hundred

post-mortem examinations of the bodies of new-born infants, failed to find a single deposit of tubercle, and Gluge asserts that there is no born tubercle."‡ Tuberculosis to-day is the same, and manifests itself in the same manner that it did centuries ago. It reveals the same pathological appearances in one case as in another, and maintains its specific character under all circumstances. How then is it possible to harmonize known facts with the doctrine of hereditary transmission, when diseased parents and the east wind are equally effective in producing the same specific result? That constitutional peculiarities are not pathological needs no argument; and therefore our faith in their transmission need not be put upon the stretch in acquiescing in this belief. Nor is it to be denied that constitutional peculiarity may be acquired and still leave the body in a physiological condition. As an instance, most persons have a transmitted constitutional condition of body that may be infected by the virus of smallpox; this habit of body may be so altered, by vaccination or otherwise, that it cannot be infected, and still leave the body in a physiological condition. The susceptibility was transmitted and it is destroyed. On the other hand, the susceptibility may be acquired instead of being transmitted, so that he who was born constitutionally protected may become jeopardized if exposed to the infecting influence of the smallpox germ. Even in the propagation of this highly infectious disease two distinct factors are engaged, between which there is a perfect coadaptability, if I may so speak, for when they are brought together they combine to bring about a certain result, uniform in appearance and constant in character.

We have a marked illustration of the fact that certain modified conditions of the parents are not transmitted to the offspring in the case where parents have been vaccinated and yet there is no protection from smallpox in the child. This has been aptly compared to the soil and the seed. The earth could not bring forth fruit without the seed, the seed could not germinate and reproduce itself without the soil. The soil, in order to be productive, should be fertile, and the seed should embody within itself the elements of life. The condition of the body, like the condition of the soil, determines its efficacy as a factor and its relevancy to a specific result when joined to that other factor, the seed or germ, in the production of disease. The body is the soil for disease-producing germs. If the body does not offer a suitable nidus, the seed planted therein could not germinate, grow, bud, bloom, or fructify. This peculiar condition of various parts of the animal body which offers a suitable soil to disease-pro-

* Practice of Physic, London, 1668, page 170.

† The Practice of Medicine To-Day, London, 1869, page 48.

‡ Quoted by Durant, Trans. of the New York State Med. Soc., 1878, p. 174.

ducing germs is familiarly known in medicine as *predisposition*. It is that which is transmitted from parent to child,—the predisposition to certain diseases, and not the disease itself. A tuberculous parent may transmit this soil, this habit of body, this *predisposition*, to his or her offspring, but cannot, under any circumstances, at the same time transmit the seed in a dormant state already planted in that soil. Dissections, as already stated, have not revealed tubercles in the new-born. They may be born with many physical imperfections, but never with any trace of tuberculosis. The individual must be subjected to disturbing extrinsic causes before there are any evidences of tuberculosis, and, when such manifestations do occur, they are of a peculiar and constant kind. One case of tuberculosis is as much like another as one case of smallpox is like another of that disease. It would indeed be a strange coincidence, and one that could not be accounted for by any telluric or atmospheric influences, so variable in their nature and uncertain in their operation. When we observe a constant recurrence of symptoms and pathological changes in a series of cases, we naturally conclude that a specific cause is operating upon a peculiar condition of body to produce such a uniform result. It is evident that the offspring of phthisical parents sometimes escape the disease, for M. Pidoux states that "not over twenty-five per cent. of those born of consumptive parents themselves become phthisical."*

The predisposition is not only inherited, but is also acquired by the offspring of healthy parents: thus parents of non-phthisical children may themselves acquire the disease under conditions favorable to its development. It is not contended by those who believe in and know the fact of the contagiousness of phthisis that the disease is thus contracted as frequently as other infectious or contagious diseases are acquired; but I am free to say, however, that there is far more danger to be dreaded from nursing the phthisical in private practice than there is from nursing cases of typhoid fever. In the latter disease the *materies morbi* reside in the excreta, and by cleanliness the infectious element is promptly removed and the danger lessened. This is not the case in phthisis, for in that disease the *material cause* resides in the effete matter constantly being thrown off from the lungs of the stricken individual, especially in the advanced stage of the disease. This has been proved by Ransom,† who found the bacillus tuberculosis in the air of a room containing several advanced cases of phthisis. Dr. R. Charnley Smith‡ detected them in a

respirator worn by a phthisical patient, and Dr. C. T. Williams,§ by an ingenious method, has found the bacillus in fair abundance in the extracting flues at Brompton Hospital. The tubercular bacillus is characteristic, and can readily be discriminated from all other bacilli. It has been found in all the tubercular lesions of the organs and tissues of the body of the phthisical, including, of course, the osseous system and its medullary substance. It has also been found in all the secretions and excretions of organs similarly affected. It is a well-known fact that phthisis prevails to a great extent in most of the European armies, and this prevalence can only be accounted for by the contagious character of the disease. As an evidence of this, it might be stated that Surgeon-General Von Lauer,|| of the Prussian army, has recently issued a circular to the medical officers, directing them not only to isolate the phthisical from the non-phthisical, but that *special means be taken for the disinfection of the sputa in tuberculous cases*.

"Sir William Wild,¶ in the Irish Census Reports for 1851, states that, in the years 1847, '48, '49, there died of phthisis in Ireland 66,000 persons, or 22,000 per year. This occurred before the tide of emigration to this country set in. So frightful a mortality can only be attributed to the crowding together of people obliged to breathe an atmosphere loaded with the germs of this disease.

It is well known that the red as well as the white blood-corpuscles sometimes leave the vessels and migrate through the adjacent tissues. They have even been seen to enter the vessels. These corpuscles, as is also well known, are from the $\frac{3}{3200}$ to the $\frac{1}{4000}$ of an inch in diameter. How much easier would it be for the *tubercle-bacillus*, which is generally described as varying in length from the $\frac{1}{12000}$ to the $\frac{1}{4000}$ of an inch, and having a breadth of one-fifth of its length, to escape from or enter the blood-vessels! It is through the medium of the lymph and the blood that these bacilli are carried throughout the system. The tubercle is developed according to, and is governed by, its own laws, as are the eruptions of smallpox, or the formation of false membrane in diphtheria; and who will deny that there is a *specific contagium* in the blood, in cases of these diseases, before such local manifestations occur? I hold that tubercle, as we know it, is never a primary product; it derives its origin from the action of a pre-existing *materies morbi*. The lymph or the blood carries the morbid material throughout the body, and certain organs attempt to eliminate the poison, but, failing to do so, become themselves the ground in which the poison accumulates. Why certain organs are more prone than others to become the receptacle of these de-

* Quoted by Dr. Durant, Trans. of the New York State Med. Soc., 1871, p. 172.

† A History of Tuberculosis. By E. E. Sattler. Cincinnati, 1883, p. 164.

‡ The Lancet, January 20, 1883.

§ Ibid., July 28, 1883.

¶ Sanitary Engineer, 1883, vol. viii. No. 20.

|| Dublin, 1856, vol. i. p. 447. Also quoted by H. McCormac, M.D., "On Consumption," London, 1865, p. 225.

posits, I will not here attempt to explain. Perhaps the peculiar structure of the lungs, and the fact that all of the blood of the body must and does pass through them in great quantity and with great velocity, may be one reason why they are apt to be the seat of tubercular deposit, the softening and breaking down of which is the result of an inherent irritation of the *materies morbi*: this being a foreign matter, the lungs rebel against its presence and make an effort to cast it off. More or less perfect parallels are seen in the exanthems, where the skin becomes the eliminating organ,—in diphtheria, where elimination is by the mucous membrane, and in smallpox, scarlet fever, measles, and erysipelas, diseases each having its own peculiar and characteristic eruption, each respective disease being due to the presence and action of a peculiar characteristic *materies morbi* prior to the appearance of local symptoms. In the attempt at elimination or resistance to the invasion of these poisons we have the lesions so characteristic of them, and generally recognized as belonging to the disease. Do they constitute the disease, comprising both its cause and effect? By no means; they are but the expression or effect of the cause, precisely as tubercle in the lung or elsewhere is but the expression or effect of a pre-existing *materies morbi*.

The germs producing these diseases are not diseased germs; they are germs in perfect health as to themselves, and are capable of producing disease only where a nidus suitable for their development is found. It seems to me unnecessary to enter into any labored course of reasoning or offer any lengthened recital of examples, further than has been done in this paper. There is still a ring of mystery in the minds of some physicians about this whole matter. But when, in the near future, the smoke and dust have been made to subside by the great workers who are now engaged in this promising field of labor, and when all the avenues and by-ways are macadamized, so to speak, by their results, then will this much mooted and intricate subject be far on the way to a final settlement, and millions of lives saved annually from premature graves.

So thoroughly am I impressed with the importance of this question, and of the incalculable advantage a thorough understanding of its bearings must be to the members of my profession, that I feel that I have not consumed time unprofitably in my effort, however faulty it may be, to set before you the facts which have convinced me of the contagiousness of a so fearfully common and invariably fatal disease as tubercular phthisis.

MURDOCK'S LIQUID FOOD consists of the juices of raw meat and fruits. In chronic starvation in delicate women, or in apepsia of infants, it is highly useful.

REVIEWS AND BOOK NOTICES.

DISEASES OF THE THROAT AND NOSE, INCLUDING THE PHARYNX, LARYNX, TRACHEA, ŒSOPHAGUS, NOSE, AND NASOPHARYNX. By MORELL MACKENZIE, M.D. Lond. Vol. II., Diseases of the Œsophagus, Nose, and Naso-Pharynx, with Index of Authors and Formulæ for Topical Remedies. Illustrated. Philadelphia, P. Blakiston, Son & Co., 1884. 8vo, cloth, pp. 550.

An accident, which entirely destroyed by fire the sheets of this second volume just as they were ready for binding, unfortunately still further delayed the completion of a work which has been earnestly looked for by the profession, and which has occupied the attention of its author for seven years.

As the first volume discussed the affections of pharynx, larynx, and trachea, so the second completes the consideration of the subject by taking up the disorders of the gullet, nose, and naso-pharynx. The "Diseases of the Neck" will be issued at some future time as a monograph.

The principal portion of the work is devoted to the disorders of the upper air-passages, which are discussed in a masterly manner. The text has been most carefully written, and abounds with references to recent work in this most active department of medicine, and there is displayed a familiarity with, and a desire to do full justice to, American work in this important field. The illustrations are sufficiently numerous, well selected, and well executed, and add very much to the value of this most admirable treatise, which in its completion fully meets the high expectations raised by the first volume. Without making invidious comparisons, we may say that, in point of scientific attainment, literary execution, and typographical make-up, this work of Mackenzie is most excellent, and leaves nothing to be desired.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART. By CONSTANTINE PAUL, Member of the Academy of Medicine, Physician to the Lariboisière Hospital. Translated from the French. New York, William Wood & Co., 1884. 8vo, pp. 335.

This volume is an important one, and adds much to the value of the excellent series in which it appears. The subject-matter includes the familiar facts, but they are often presented from a novel point of view. The cuts are numerous and good, and the text is enriched, when necessary, with case-histories. We notice with regret the contrast between the amount of space devoted to diagnosis and that given to treatment. In pages they are respectively as 294 to 36. The contrast in style and matter is even more striking. It is difficult to understand how the author of the admirable first part could permit the second part to appear over his name. J. C. W.

GLEANINGS FROM EXCHANGES.

PTOMAINES.—Professors V. K. Anrep and A. V. Poehl, of St. Petersburg, sum up (*Vestnik Sudebnoi Meditsiny ee Obshtchestvennoi Hyghieny* [*The Herald of Forensic Medicine and Social Hygiene*], 1884, vol. i. pp. 1-29) an interesting article based on their own investigations and a full review of the literature, as follows:

1. Putrefaction, fermentation, and other as yet indefinable alterations of albuminous substances are accompanied by the generation of alkaloid-like bodies,—ptomaines.

2. The number of ptomaines is very great, and their chemical and poisonous properties are very different.

3. There are known fixed and volatile, fluid and solid, amorphous and crystalline ptomaines. It is interesting to note that all fluid ptomaines, like all fluid vegetable alkaloids (with the exception of pilocarpine), do not contain oxygen.

4. Almost all ptomaines change red litmus to blue, and syrup of violets to green.

5. Like alkaloids, they form salts with acids, the formation proceeding without giving off water (again similarly to alkaloids and ammonia).

6. In regard to their solubility, ptomaines behave very differently, some of them being soluble in water, others in ether, alcohol, benzine, chloroform, and amyl-alcohol. Ptomaine salts are easily soluble in water.

7. Some ptomaines are tasteless and colorless; others possess an intense bitter taste or aromatic sweetish odor; and others again evolve a cadaveric odor or one resembling coniine or nicotine. When treated with acids, they sometimes emit a pleasant floral odor.

8. Ptomaines obtained from rye-meal which has been subjected to fermentation give the same reactions as the ptomaines of any other extractions. These reactions are as follows: (a) A solution of iodide of potassium with biniodide of mercury produces a whitish precipitate in a ptomaine solution slightly acidulated with hydrochloric acid. Twenty-four hours later, microscopic examination detects that the precipitate consists of minute prismatic crystals. (b) A solution of iodide of potassium with iodine being added to an acidulated ptomaine solution produces either a flocculent or a finely granular red-brown precipitate, which is insoluble in diluted hydrochloric acid. (c) A solution of phospho-molybdenate of soda gives a yellowish amorphous precipitate, which is insoluble in diluted nitric acid, but, on the addition of liquor ammoniæ in excess, at first takes a blue-green color and afterwards dissolves, giving either a bright blue or a green solution. The blue color is mostly observed during the first stages of putrid decomposition. The original precipitate produced by phospho-molybdenate of soda, on being heated, assumes a

green color without any addition of ammonia. (d) Phospho-wolframic acid (prepared after Scheibler's method) gives whitish or grayish precipitates which are insoluble in diluted sulphuric and hydrochloric acids, but easily soluble in ammonia. (e) A solution of tannic acid gives a white precipitate; the latter does not appear if tartaric acid be present. (g) A solution of iodide of potassium with iodide of bismuth in presence of diluted sulphuric acid gives a yellowish precipitate, part of which passes into solution on heating and reappears again on evolving. (h) A solution of iodide of potassium with iodide of cadmium sometimes produces precipitates which are soluble in the excess of the reagent, and which by degrees assume a crystalline structure. This reagent precipitates the products of the first stages of putrefaction; later on in the course of the latter there appear some products which are not precipitated by iodides of potassium and cadmium. (z) In some cases, a solution of corrosive sublimate gives precipitates which gradually take a crystalline structure; in other cases, however, ptomaines are quite indifferent to their reagent. (j) A solution of chloride of platinum gives, with some ptomaines, precipitates which are usually crystalline and soluble in hydrochloric acid, and consist of a double salt (chloride of platinum plus chloride of ptomaine). Similar double salts are given by chlorides of gold and zinc.

9. Ptomaines are optically inactive bodies.

10. The color-reactions of ptomaines are as various as those of vegetable alkaloids.

11. In the course of a forensic chemical examination, it is advisable to discard the use of sulphuric acid, and to use tartaric acid. The further treatment is to be performed after Dragendorff's method.—*London Medical Record*.

EFFECTS OF REMOVAL OF SPLEEN IN THE DOG.—Since the celebrated experiments of Dalton, it has been taught with much positiveness that the removal of the spleen is followed in dogs by certain peculiarities,—morbid cravings, ravenous appetite, and more or less change of disposition,—but it would seem that this does not uniformly follow.

Dr. William H. Mercur reports (*Med. and Surg. Reporter*, May 31) the result of this operation upon a one-year-old poodle dog, belonging to Dr. W. J. Asdale. Ether having been administered, the spleen was removed entire; the pedicle was pierced in the centre and ligatured twice, and dropped back into the abdomen. The parts were then thoroughly cleansed, and the abdominal incision closed with six silver sutures, which were removed in two weeks, the wound having healed. The animal survived the operation nine years, living in the house of Dr. Asdale as a house-dog.

In this case, the reporter says, the operation did not seem to change his disposition;

he remained good-natured and thrifty. He developed rapidly, his weight at the time of his death being estimated at from twenty-five to thirty pounds, having gained at least ten pounds since he was a year old. He was a good, active watch-dog, a good feeder, never morose or sullen. The greater part of the time he was well nourished; his skin was clean, and his hair smooth and glossy.

He died suddenly, after being exposed to severe cold. The post-mortem was carefully made. The body was in good condition and not emaciated. The only pathological lesion found was a severe enteritis affecting the lower part of the small intestines, from which, in all probability, the dog died. His lungs, heart, kidneys, and all his other organs were perfectly normal. There was not the slightest trace of the spleen: nothing to denote its former locality, no remains of a pedicle, nor anything to show that nature had made the slightest attempt at restitution. Its origin was entirely obliterated.

RECOVERY OF MOTION AFTER RESECTION OF THE KNEE-JOINT.—Mr. Boutflower recently exhibited before the Manchester Medical Society a boy, 7 years old, who had suffered with ankylosis at an acute angle, and pulpy disease, following strumous synovitis, for which he had opened the joint by the ordinary semilunar incision, removed the patella, excised the contiguous surfaces of the tibia, fibula, and femur, and scraped away the spongy synovial membrane with a Volkmann's spoon. After the operation, the wound was washed with a solution of chloride of zinc (gr. iv to ʒj), and the limb placed on a Watson's splint, the after-treatment being carried out under strict Listerian principles. The wound was quite healed by the fourteenth day, the dressing only having been removed three times during the treatment. The boy now walks about with facility, showing only a very slight degree of lameness in locomotion; the knee itself differs very little in appearance from a healthy knee-joint, notwithstanding that a considerable section has been removed from both the femur and tibia, as well as the entire removal of the patella.—*Lancet*, May 17.

ACUTE INFLAMMATION OF THE OCCIPITO-ATLANTAL JOINTS, ACCOMPANIED BY PYÆMIA.—Mr. Ballard reports in the *Lancet* the case of a boy, 6 years of age, who, with a rigid neck, had some fulness, tenderness, and rise of local temperature on each side of the median line in the region of the occipito-atlantal joints. He was ill nourished and anæmic; temperature, 100.5°. He had never been sick before, and the present attack had come on only four days before coming under observation, when he came home from school complaining of stiffness and pain in the neck. There was no family history of tubercle, rheumatism, or joint-disease. The swelling

and signs of local inflammation increased so that incisions upon each side of the neck were made down to the transverse processes of the atlas. No pus was evacuated, but there was a free discharge of serum, which relieved the œdema. Subsequently effusions occurred in the left elbow-joint, and abscesses appeared on the surface of the body. Death occurred on the fifteenth day from the beginning of illness.

At the autopsy, there was found purulent effusion into the capsules of the occipito-atlantal joints, and these joints were completely disorganized; the cartilages had largely disappeared, and the surface of the bone was carious. That the disease was not primary in this location, but was secondary to some other injury undetected at the post-mortem examination, is possible, but not probable, for disease of the articulation existed for twelve days before constitutional infection was observed. In future cases Mr. Ballard has determined to interfere more actively by early evacuation of pus and drainage, with the methods of antiseptic surgery, which have revolutionized the prognosis and treatment of joint-afections.

QUININE BISULPHATE.—The United States Army this year contracted for eight thousand ounces of bisulphate of quinine, and thus far has not bought any of the ordinary sulphate. The fact that the ready solubility of the bisulphate enables it to be dispensed in aqueous mixtures, as well as the equally well ascertained fact that this ready solubility renders its action more prompt and certain, are probably two of the chief reasons why this salt was given the preference. Outside the army the bisulphate has been steadily gaining in favor. It can be afforded at a price slightly lower than that of the sulphate, and, in equal doses, seems to be equally efficient. It contains from fifty-nine to sixty per cent. of alkaloid quinine, while the ordinary sulphate contains about seventy-five per cent. Should the experience of army surgeons be satisfactory, this soluble sulphate will probably be much more largely used in the future.—*The Druggists Circular*.

A POINT IN THE DIAGNOSIS OF STRANGULATED HERNIA.—Dr. Englisch, of Vienna, on examining the urine of patients under treatment for strangulated hernia, has ascertained that it always presents albumen in proportion to the duration of the strangulation. If surgical means be not adopted, the albuminuria continues until the death of the patient. The quantity of albumen is not affected either by the date of the hernia, the size of the sac, the frequency of anterior strangulations, nor by a febrile condition. When there is simple protrusion of the omentum, albumen is absent. Prof. Nothnagel attributes this albuminuria to diminished intravascular pressure resulting from the pres-

ence of a strangulated hernia.—*British Medical Journal*.

A CRITICISM FROM INDIA ON THE CHOLERA-BACILLUS.—The *Indian Medical Gazette*, in the course of an elaborate review of Koch's work and discovery, says, "A review of the whole evidence brought forward by the German Cholera Commission shows that they have only succeeded in establishing the fact that a peculiar form of bacillus is normal to the intestines of cholera patients; but the exact part which this organism plays in the morbid process is left wholly undetermined. Only a very moderate degree of probability has been made out in favor of this bacillus being the cause of cholera; but the futility of trusting to probabilities and conjecture in an etiological inquiry into cholera is generally well recognized. The problem, therefore, of the causation of cholera still remaining unsolved, it awaits and ought to receive that careful attention which its great importance demands." It is not fair to depreciate the value of Koch's discovery; but, on the other hand, it will do no good to give to it any greater weight than the evidence strictly justifies.—*Medical Record*.

VIRCHOW UPON THE CHOLERA- AND TUBERCLE-BACILLUS.—At the time of the return to Berlin and public reception of the Cholera Commission, Prof. Virchow made a speech, in which he uttered some timely words of warning. He said, "It appears to me that the government is not entirely free from the opinion that with the discovery of the bacillus everything is accomplished which may be necessary to control the disease. In this connection I may speak a warning word. It is more than thirty years since we discovered the little organism which causes the small-pox, but this fact has not changed in the least the practical measures previously adopted for its prevention. The tubercle-bacillus is a very important thing, but, with the exception of a new point of view of the disease, which is given, we are no further advanced in our practical relations to it." He then goes on to say that the cholera had for some time been practically treated as though it were caused by a special organism. He also referred to the laxity of the English in the matter of quarantine.—*Medical Record*.

RECOVERY FROM STRYCHNINE-POISONING.—At the meeting of the St. Louis Medical Society (*St. Louis Med. and Surg. Journal*, p. 179), Dr. Atwood reported a case of a man who had taken strychnine with suicidal intent. When seen, he was in tetanic convulsions, but inhalation of chloroform and a hypodermic injection of morphine and atropine were successful in relieving the spasm in about fifteen minutes. The patient then was rational, and stated that he had taken three

grains of the poison about four hours before. The convulsions returned about three hours later, when the same treatment was adopted. Later he was given thirty grains of bromide of calcium and chloral hydrate, and the next day he was well, except that he was suffering from muscular soreness.

Dr. Atwood is the present editor of the *St. Louis Medical and Surgical Journal*, Dr. Thomas F. Rumbold having retired.

MISCELLANY.

THE DRUGGISTS CIRCULAR AND CHEMICAL GAZETTE has undergone a change of editors. It will be remembered that, a few years ago, Dr. L. V. Newton, who for nearly twenty years had occupied this responsible position, relinquished the duties to his associate, Mr. J. L. A. Creuse, who now, after several years' active labor, also finds himself obliged to retire, on account of failing health. The publishers have secured the services of Mr. Henry B. Parsons as editor, who brings with him many qualifications for the office. *The Druggists Circular* is a practical journal of chemistry as applied to pharmacy, arts, and sciences, and is a general business organ for druggists, chemists, and apothecaries: in its field it is unexcelled.

DR. JOHN B. CHAPIN, who was elected by the managers of the Pennsylvania Hospital to succeed the late Dr. Kirkbride as physician-in-chief and superintendent of the department for the insane (to accept which he resigned the charge of the Willard Asylum for the Insane in New York), has been installed in his new position.

Dr. Chapin is a gentleman of known ability, and is well qualified for his duties. The managers are to be congratulated upon securing the services of such an efficient and experienced alienist as Dr. Chapin, under whose administration the interests of the hospital and the patients will both be advanced.

NOTES AND QUERIES.

OBITUARY NOTICE.

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
WASHINGTON, D.C., August 20, 1884.

In announcing to the officers of the Medical Department the death of Joseph Janvier Woodward, Surgeon and Brevet Lieutenant-Colonel, U.S. Army, which occurred near Philadelphia, Pa., August 17, 1884, the Surgeon-General wishes to offer his tribute of respect to the memory of the deceased, whose distinguished career and valuable services for a period of twenty-three years have shed lustre on the corps, and for whose untimely loss feelings of profound regret will be shared alike by his comrades in arms and by the profession at large.

Dr. Woodward was born in Philadelphia, Pennsylvania, October 30, 1833, and was educated at the Central High

School of that city, graduating with honor as Bachelor of Arts in 1850, and receiving the degree of Master of Arts from the same institution in 1855.

He graduated in medicine at the University of Pennsylvania, April, 1853; entered the army as assistant-surgeon, August 5, 1861; became captain and assistant-surgeon, July 28, 1866; major and surgeon, June 26, 1876. "For faithful and meritorious services during the war," he received the brevets of captain, major, and lieutenant-colonel, U.S. Army.

He was assigned to duty in this office May 19, 1862, and from that date until the beginning of the illness which terminated in his death was intimately identified with its professional and scientific work.

While the valuable results of his life's labor are comprehended in a long list of miscellaneous publications, both professional and scientific, too familiar to the corps to require individual mention, his greatest triumphs were won in the field of microscopical investigation in normal and pathological histology, and in his happy application of photomicrography to the purposes of science. In these pursuits he attained remarkable success, and achieved an enviable, world-wide reputation, leaving to science and medicine lessons of undoubted value and usefulness. Of his strictly professional work, the medical portion of the "Medical and Surgical History of the War of the Rebellion" was the crowning achievement. In the second part of this work he developed the results of his careful investigations into the nature and pathology of the intestinal diseases which had proved so fatal in the late war. Here also he displayed his wonderful capacity for that minute and exhaustive research which forms so striking a feature of his writings.

As in the case of his co-laborer, Otis, he yields to other hands the honor of completing his labors.

In addition to his engrossing professional duties, his restless activity of mind led him to seek recreation in his favorite studies, physics, art, and philosophy.

Endowed with a retentive memory and of untiring industry, he acquired a vast store of information, which he held available for use at will; fluent of speech, he took delight in the expression of his views and opinions, both in social converse and in the arena of scientific debate.

His fund of knowledge, his strong convictions, his tenacity of opinion, and his quick perception made him a controversialist of no low order.

With such a record, it is needless to speak of his zeal, his ambition, or his devotion to his profession, and especially to the reputation of the corps of which he was so bright an ornament.

Of a sensitive, highly-strung, nervous organization, the confinement, anxiety, and labor to which he was subjected in his attendance upon the late President Garfield during his long illness proved too much for a mind and body already overstrained by incessant labor, and precipitated the illness which finally terminated his life.

At the time of his death, Dr. Woodward was a member and ex-president of the American Medical Association, a member and ex-president of the Washington Philosophical Society, a member of the National Academy of Science, of the Association for the Advancement of Science, of the Academy of Natural Sciences of Philadelphia, and of the College of Physicians and Surgeons of Philadelphia. He was an honorary member of several American and foreign scientific, medical, and microscopical societies, and the recipient of many distinguished honors from learned bodies in this country and abroad.

R. MURRAY,
Surgeon-General, U.S. Army.

TO THE EDITOR OF THE MEDICAL TIMES.

Dear Sir,—The accompanying statement of the recent action of the Obstetrical Staff and Board of Governors of the Maternity Hospital may be of interest to your readers.

Yours very truly,

J. V. INGHAM,
Ch'n Ex. Com. Maternity Hospital.

1342 SPRUCE STREET, PHILADELPHIA, August 27, 1884.

At a recent meeting of the Obstetrical Staff of the Maternity Hospital, the following resolution was unanimously adopted:

"Resolved, That the Obstetrical Staff of the Maternity Hospital desire, if agreeable to the Board of Governors, that a female resident physician be appointed to serve in the Maternity Hospital, the length of the term to be regulated by circumstances, not longer than one year."

This resolution was presented to the Board of Governors at their regular monthly meeting, held at the hospital, August 26, when they unanimously resolved,—

"1. That the Maternity Hospital should have a resident physician; and,

"2. That the resident physician must be a woman."

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 17, 1884, TO AUGUST 30, 1884.

HEAD, JOHN F., COLONEL AND SURGEON.—Granted leave of absence for four months. S. O. 201, A. G. O., August 27, 1884.

WOODHULL, A. A., MAJOR AND SURGEON.—Detailed as member of Medical Examining Board at U.S. Military Academy, West Point, New York, *vice* Captain R. H. White, relieved. Upon adjournment of the Board, to return to his proper station. S. O. 201, c. s., A. G. O.

LIPPINCOTT, HENRY.—Promoted to major and surgeon, to rank from August 17, 1884, *vice* Woodward, deceased.

BARTHOLF, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in Department of the Columbia, and to report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 199, A. G. O., August 25, 1884.

FINLEY, J. A., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted him in S. O. 91, c. s., Department of Texas, extended two months. S. O. 198, A. G. O., August 23, 1884.

CRAMPTON, LOUIS W., CAPTAIN AND ASSISTANT-SURGEON.—To report at Creedmoor, Long Island, New York, not later than August 30, as competitor, and, in addition thereto, as medical officer of the detachment of competitors. S. O. 41, Division of the Atlantic, August 20, 1884.

TAYLOR, M. E., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months, to take effect on arrival of a medical officer at David's Island, New York, to replace him. S. O. 200, A. G. O., August 26, 1884.

COCHRAN, J. J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at the Presidio of San Francisco, California. S. O. 81, Division of the Pacific, August 16, 1884.

BIRMINGHAM, H. P., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave of absence. S. O. 162, Department of the Missouri, August 12, 1884.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Walla Walla, Washington Territory, and to take station at Vancouver Barracks, Washington Territory. S. O. 120, Department of the Columbia, August 13, 1884.

DIETZ, WILLIAM D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at the Military Academy, West Point, New York, and ordered to the Department of the Missouri for duty. S. O. 202, A. G. O., August 28, 1884.

FISHER, W. W. R., FIRST LIEUTENANT AND ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Cochran, to report in person to commanding general, Department of Arizona, for assignment to duty in that department. S. O. 81, c. s., Division of the Pacific.

MCCAW, WALTER D.—Appointed Assistant-Surgeon, with rank of First-Lieutenant, to date from August 20, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM AUGUST 17, 1884, TO AUGUST 30, 1884.

P. A. Surgeon P. M. RIXEY, orders to U.S. steam-ship "Lancaster" revoked. To continue on special duty.

Medical Director C. MARTIN, to be retired August 21, 1884.

Surgeon T. C. HEYL, detached from U.S. steam-ship "Independence," ordered to U.S. steam-ship "Adams."

Surgeon J. G. AYERS, detached from U.S. steam-ship "Adams," placed on waiting orders.

Assistant-Surgeon L. W. CURTIS, detached from U.S. steam-ship "Adams," placed on waiting orders.

P. A. Surgeon F. B. STEPHENSON, detached from Navy-Yard, New York, ordered to Coast-Survey steam-ship "Bache."

P. A. Surgeon E. Z. DERR, detached from Coast-Survey steam-ship "Bache," placed on waiting orders.

PHILADELPHIA, SEPTEMBER 20, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE ON HEMIPLEGIA OF CEREBRAL ORIGIN.

*Delivered at the Department for Nervous Diseases of the
Manhattan Eye and Ear Hospital, New York,*

BY W. R. BIRDSALL, M.D.

(Reported for the *Philadelphia Medical Times*.)

GENTLEMEN,—Here is a case which represents a very common form of paralysis. On seeing the patient walk you will detect at once a gait which is common to the form of paralysis known as hemiplegia of cerebral origin. A study of the gait in these cases is important; and I will show you presently a patient who has another form of paralysis, that you may be able to contrast the two. Notice the position in which the patient holds his paretic arm: nearly all the muscles are flexed; the elbow is drawn to the side of the body rather tightly; the forearm is flexed upon the arm, and the hand is slightly flexed upon the forearm; the fingers are flexed on the hand, and the thumb is flexed within the fingers. The flexors in this case of hemiplegia contract more strongly than do the extensors, and we have the condition known as *contracture*,—the late rigidity of hemiplegia. Testing his power, you will notice that the muscles of his hand are affected more than the larger muscles of the extremity, or, in other words, the muscles which are most under voluntary control are the ones which are principally affected by the paralysis. You see he has very little power to extend the hand, but he has considerable power to throw out the elbow. The deltoid movement is good; the extensors of the wrist and fingers are affected, and the small muscles of the hand are also affected, the patient having almost no power over them. These muscles are the ones which, in the normal state, are particularly under voluntary control.

Looking at the trophic condition of the parts, we find the nutrition is nearly normal. The temperature is about the same as that on the normal side. On the paralyzed side there is a peculiar curving of the nails, which is not noticed in those on the other hand: so that we do get trophic

changes of a peculiar nature in this case of paralysis due to cerebral disease, which is quite different from what we observe in the paralysis of these muscles due to a lesion of the spinal cord.

With regard to sensory disturbance, the patient says he feels a tingling sensation in the fingers at times and some numbness in the arms. He has described to me several times a slight numbness; but when we test sensation with the *æsthesiometer*, comparing the two sides, we find that there is no difference: so that, while he has no *anæsthesia*, strictly speaking, he has some numbness, or *paræsthesia*, as it is termed. Sometimes we have increased sensibility to painful impressions,—*hyperalgesia*,—but here this sense is normal.

With regard to motor power, tested with the *dynamometer*, the left hand registers 95, while the right, or the paralyzed hand, registers only 20, and about a month ago only 10.

I wish you to notice the elastic condition in the paretic arm. If you tell him to flex the right arm, you will find voluntary fixed resistance to your efforts to straighten the arm, whereas on the affected side there is observed elasticity, due to the *contracture*.

If he close the right or unaffected hand tightly, he at the same time contracts the left hand with equal or even greater power than when he attempts to grasp the *dynamometer* with that hand. This is termed an "associated movement," and is present in certain forms of paralysis. Attempts have been made to explain it in various ways. One theory is that the voluntary impression which extends down the healthy side passes over by commissural connection in the cord to the centres in relation to the opposite member. You can readily see how this might occur, since the pathway of communication is interrupted above.

In testing his gait, you notice that he swings the affected foot out a little in order to prevent its touching the floor, from the fact that the knee is not bent and the toe is not raised. You notice also a little more stiffness in his gait than is normal.

Testing the tendon reflex of the lower extremities, and comparing the two sides, we find that on the affected side it is greatly exaggerated. The muscular contraction is quicker and more violent. Not only is the reflex from the patellar tendon

greater, but also that from the muscle itself. This latter phenomenon is termed muscular excitability. On the right side there is no response from touching the muscle itself. In the legs we find the condition of nutrition good; the muscles are normal; the skin is of equal temperature on the two sides, and there is no more waste on the affected side than you would expect from moderate disuse. Another interesting point is the fact that while there is almost absolute paralysis in the muscles of the arm, in the muscles of the lower extremity we find paralysis present to a less degree, and this corresponds to the fact explained with regard to the upper extremity, that the muscles under voluntary control are the ones most affected in paralysis from cerebral disease. The muscles of the lower extremity are not so much under control as are the muscles of the hand; they are not so much a cerebral tool, so to speak, and are less affected.

It is with difficulty that you detect any paresis in the muscles of the face, although at an earlier period there was some paresis here. Even now you will notice that the naso-labial fold is not quite so distinct on the right as on the left side, and the corner of the mouth droops slightly. He is able to close the eyelids tightly, but in these cases of paralysis from cerebral disease, if you find the facial involved, it will be the lower division. We may almost consider the facial nerve as representing two distinct nerves, the upper division supplying those muscles which surround the orbit, the ocular muscles, and the lower division supplying those muscles in the lower portion of the face and surrounding the mouth. It is the lower set of muscles which are mostly affected in hemiplegia of cerebral origin, because the lower facial group is particularly under cerebral control. The speech-muscles and the muscles of expression are mostly located in the lower part of the face, and there is reason to believe that there are separate nuclei of origin of these different parts of the facial nerve. A point of distinction which, of course, is familiar to most of you, between the cerebral form of paralysis and the common form known as Bell's paralysis, is that in the latter all the muscles are affected.

The pupils seem to be normal; the tongue is straight; the uvula is straight,

and the palatal arches are equal; and the latter is a more important sign than the condition of the uvula. In other words, all evidences of paralysis have disappeared from the head-muscles, the muscles now principally affected being those in the forearm, and it is the rule in cerebral paralysis that the facial muscles recover sooner than others.

Testing the muscles with electricity, we find that the reactions are normal, being equal on the two sides. The same degree of current will produce the same result in corresponding muscles. With the galvanic current there is the normal formula of contraction. So we may exclude a peripheral affection, or affection of the nuclei of origin of the motor nerves in the anterior horns, as far as the extremities are concerned.

When we come to inquire into the history of this case, you may be surprised to see so young a man—twenty-eight years of age—affected with hemiplegia. We naturally associate cerebral hemiplegia in our minds with the aged, and for the reason that a great many cases of hemiplegia are due to hemorrhage, and hemorrhage, the most frequent cause of which is miliary aneurisms, seldom occurs under forty, if we except the cases of meningeal hemorrhage of infancy: so that in a case like this we may fairly exclude hemorrhage, and we are limited to thrombosis, or, I may say, occlusion of the arteries by either embolism or thrombus, or a neoplasm, such as a syphilitic neoplasm. Syphilitic arteritis is a thing to be thought of; but when we come to inquire into the history of the case, we find that this can be excluded, the attack having been rapid in its onset, the man giving no history of specific disease. The disease with which he was affected at the time when the attack came on throws light upon the probable origin. This man had typhoid fever in September; he was well enough after nine weeks to leave the hospital, but after that he had a relapse, during which he became unconscious, and while unconscious paralysis developed rapidly. We have, then, two conditions, thrombosis and embolism, which might account for this lesion, and it would seem most probable that thrombosis was the cause. He has no heart-disease; but that is not evidence that it was not embolism. We have cases of embolism in which we are unable during life to detect

any cardiac disease; but it is well known that in typhoid fever, and in other low fevers, there is a decided tendency to the formation of thrombi. You know how often we get occlusion of the veins from that cause. This is altogether the most probable cause of his attack.

With regard to the location of the lesion, when we think of the different lesions affecting motor functions, we consider the cortex of the so-called motor area, and the tracts which lead from this cortical area down to the cord. This is generally known as the pyramidal tract. The continuation of these fibres from the motor areas of the cortex into the lower parts, whence they pass through and between the great ganglionic bodies of the brain, is that known as the internal capsule. Hemorrhages and some other lesions are more apt to occur in this particular region than in others. The most frequent location of lesion producing this general affection of the face, leg, and arm is the internal capsule. Where we have cortical disease we are more apt to have the paralysis limited in some particular way to the arm, the face, or the leg, in a manner different from what we have here; and associated with it very often is evidence of persistent intracranial disease, such as we get from tumors, meningitis, and other affections of a similar character.

As to prognosis, in a case like this, in which there is positive paralysis accompanied by decided contracture, there is evidence of quite decided destruction of nerve-tracts, and the possibility of the man fully regaining power in the arm is somewhat doubtful. His leg will probably improve. It has already improved somewhat. And his arm will improve to a considerable degree, but there probably always will be quite decided impairment of power in this member, largely due to the fact that the contracture is marked.

His mental state is not affected. Many of these cases show a decided exaggeration of emotional traits, and often a mild form of dementia is present. The emotional disturbances are apt to be more marked when the paralysis is on the left side,—that is to say, when the lesion is in the right hemisphere. Of course we do not get the disturbance of speech known as aphasia where the lesion is in the right hemisphere, unless the arrangement is different,—that is, in some cases in which

the patient is left-handed, for example, we find aphasia comes from left hemiplegia, but rarely under other circumstances.

With regard to treatment, he has been receiving tincture of *nux vomica*, ten drops three times a day, as a general tonic, and has had applications of the faradic current three times a week to the paralyzed muscles. On applying the current to the extensors of the arm we find that the flexors relax somewhat, the contracture is somewhat relieved, but, unfortunately, this effect is not permanent. The strength of contracture varies somewhat at different times, also without the application of the current. I have thought that galvanism applied continuously—quite a decided current, one pole on the back of the neck and the other passed slowly over the contracted muscles—had some effect in relieving the contraction; more so, perhaps, than the faradic current. When I use the faradic current in a case of contracture, I apply it to the muscles that are not involved in the contracture. Sparks from an influence machine or an induction coil also have a temporary effect in relieving the contracture, sometimes when other methods of electrical application have failed. But with regard to the value of electricity in these cases, I am inclined to think it is very limited. A certain number of patients claim that they get relief, that they feel better after the current has been applied, but it is usually not relief which permanently affects the paralysis to a great extent. This applies to the great majority of cases of decided hemiplegia. A certain number of mild forms, however, do improve, and rapidly, under the influence of the faradic current alone, and it is probably, on the whole, the most serviceable method of treating such cases as far as electricity is concerned. You will find, however, that the general health of the patient affects the condition of paralysis a good deal, the emotional state as well; and anything which will enable you to keep up the general tone of the patient will affect to a certain extent the condition of the paralysis, improving it. Often we find that allowing the patients to go out of town, getting a change of air, or anything which affects the general tone of the system, will improve their muscular power in the paretic parts.

Case II.—Here is a patient who will

serve for certain purposes of comparison. His gait is somewhat similar to that of the other, but there is a slight distinction which is an important difference. He does not throw his foot out as much, but allows it to fall with a slight slap upon the floor. He bends his knee a little more; there is not as much stiffness and rigidity, and the foot is allowed to fall to a slight degree, in a manner similar to what we find in paralysis due to a lesion in the anterior horns of the cord. This is only present to a slight extent because the case is a somewhat irregular and unusual one. I will refer to this point again.

I would call your attention to the speech. The words are spoken rather slowly, and the syllables are not distinctly enunciated. One or two syllables are spoken distinctly, and the others are slurred over. This, with slowness, is a condition characteristic of cortical disease, such as we get in general paresis of the insane, and also in other cortical affections, such as syphilitic lesions. It is not the speech of labio-glossopharyngeal paralysis, which is characterized by what is known as syllabic enunciation. The syllables are distinctly enunciated, but are separated, the patient speaking each syllable, one after the other, in a sort of staccato manner. Here you do not notice that. Asking him a general question, you will find that in replying he speaks a few words quite regularly, and then a few syllables are slurred. He has not noticed this himself, but says that his friends have called attention to it. It is not as well marked at present as it was when he first came to us. His attack came on about two years ago. When on the street he felt a slight numbness in the leg, which gradually increased and extended over the whole side, but he finally managed to get home, when paresis became decided in the arm, leg, and face. For two weeks he was unable to use his limbs to any great extent, but during this whole period he did not lose consciousness. After about two weeks, without any treatment, he began to improve. When I first saw him he had evidence of slight facial paresis, traces of which still remain, and you can see more readily than you could do in the other patient the difference between the two sides of the face. The naso-labial fold drops, as does also the angle of the mouth. As in the other case, it is the lower part of the face that is affected. The tongue

is protruded in a straight line. He did not notice any difficulty of speech when the attack came on.

The upper extremity does not show very much paresis at the present time, and still with the dynamometer we find it registers only 70, while upon the left side, or unaffected side, it registers 80. With regard to the dynamometer, it is only useful as a relative test between the two hands, and, as the difference in different individuals is very great between the power of the two hands, we must not place too much reliance upon it. If you have a right-handed man, however, and you find his left hand stronger than the right, it is evidently an abnormal condition, and, although the difference is very slight here between the two hands, it shows that there is paresis of the right hand.

Inasmuch as this is a case of right hemiplegia, we might raise the question, may not his speech-disturbance be aphasic? But this is not the form of speech-disturbance which we get in aphasia. In aphasia there is loss of memory of certain words. The patient is unable to find the right word, or mispronounces it. The articulation should not be affected. He may speak the wrong word, he may get in a syllable which does not belong there, but this slight slurring of the speech is not characteristic of the aphasic condition. It is, however, quite characteristic of cortical lesion, a degenerative condition of the cortex of certain parts of the speech-area.

There is a specific history in this case which I think throws a good deal of light on the character of the condition. There are evidences of primary sore, of syphilitic eruption, mucous patches upon the tongue, occurring about ten years ago. Although the patient was treated for nearly a year, his intemperate habits, according to his own admission, he thinks had much to do with his not recovering as well as he might otherwise have done.

Now, here is another factor,—his intemperate habits. You know that in patients at his age, thirty-seven, we may have from chronic alcoholism a mental condition such as we have here. This condition of speech also approaches very closely to that of the ordinary type of general paralysis of the insane. Again, syphilitic disease may give rise to similar symptoms. This man had been a pretty hard drinker for a number of years. We do not, however, from alcoholism alone usually get the decided attacks of

hemiplegia of which this man gives a history. From syphilitic disease we do; and from the fact that this man had syphilis a number of years ago, we may presume that his symptoms are due to that disease. It is usually a number of years before we get the evidence of syphilis in the central nervous system, although it is by no means necessarily a long period. We find that the usual lesions which syphilis produces are the ordinary gummata, syphilitic meningitis, and syphilitic arteritis. I believe that in its intracranial effects syphilitic arteritis is the most common, and may lead to the slow occlusion of the arteries. The most probable cause of this man's hemiplegia is that of arterial occlusion, and in regard to its location we would be led to infer, as in the other case, from the extensive distribution of the paresis, that it is probably somewhere in the internal capsule, or in parts of the pyramidal tracts below their cortical origin. At the same time, this will not account for his speech-disturbance. I think we have got to conclude that there are other changes going on in the cortical vessels themselves, and probably of a similar character: these tend to produce the degeneration which we find in these cases, which simulate in their symptomatology, and to a great extent in their pathology, the changes found in general paresis of the insane. I will not attempt to differentiate between the two conditions to-day.

There is one point about this man's case which I have not yet mentioned, and that is that he is remarkably cheerful, and feels that he is getting well very fast. He is very positive about this, a great deal more so than I am, and he asserts in very decided terms that he is perfectly well, except for very slight stiffness in the legs. In other words, his mental condition seems to have been such as to exaggerate his condition of good health. This characteristic is also one which we often see in the common type of paresis of the insane, and sometimes in chronic disease due to syphilis or alcoholic excess.

His treatment has been mainly internal. He was put upon the iodide of potassium, commencing with doses of fifteen grains, and increasing about two grains a day until he had reached a dose of sixty grains three times a day. He took for nearly a month drachm doses, and now for the past month he has been entirely without any drug. I

am in the habit of increasing the dose rapidly up to as much as a drachm, and sometimes, if the patient tolerates it well, up to as much as an ounce, a day, in cases of this sort. I say in cases of this sort,—I mean to say in cases of syphilitic arteritis or syphilitic gummata, and in which the symptoms are very urgent, such as headache, which, however, has not been prominent in this case, and other symptoms indicating intracranial pressure. And I combine mercurial treatment with it, generally in the form of inunction, bringing it up to the point of slight mercurialization. In the mean time, this patient has been receiving bitter tonics. I should say that the iodide of potassium ought to be given with large quantities of water. Many patients will tolerate immense doses of the iodide of potassium if you will only dilute it sufficiently, whereas they may not be able to take more than ten grains if the quantity of fluid is small. Probably the water also has a beneficial effect in aiding the eliminating action of the iodide of potassium. This patient also had electrical applications (faradism) to the leg, and he says that after the first application he felt almost entirely relieved. But I attribute this also to his happy frame of mind, by which he looks upon all that pertains to his disease in a favorable manner. But he has undoubtedly improved in his speech and in locomotion; his facial expression is brighter, and there is a less stupid look. The case is an interesting one to bring in contrast with the other, the first representing a common form of hemiplegia, while this one represents the effects of more than one lesion. We could not account for the condition which is present here by the simple lesion which has caused hemiplegia, although, as I have before stated, we do sometimes get decided dementia and changes in the emotions in hemiplegia from a single lesion, but not of this type.

With regard to whether there can be recovery from occlusion of the arteries, embolism, or hemorrhage, it depends largely upon the extent of the lesion. We cannot expect to get recovery of nerve-fibres which have been actually destroyed, but there is the possibility in the cerebral structure of there being pathways which have not been as frequently traversed acting as lines of communication between the cortical centres and parts below. In young patients these tracts are mapped

out quite distinctly after a time, and they seem to have acquired new functions. And then undoubtedly a certain number of the fibres at the seat of change have had their functions only partially interfered with, not actually destroyed, and it is possible that some regeneration takes place. But regeneration in this region is probably quite limited. Where a decided destruction has taken place, either from a clot or from softening, resulting from shutting off of nutritive supply by embolism or thrombosis, we are pretty sure to have permanent destruction, which is shown by post-mortem examination where we find shrinking at certain spots, indicating that actual destruction had taken place which could not be fully regenerated. So we cannot any more expect to get curative results, where destruction has taken place, than after amputation of certain parts. But what we may do in a case like this is to prevent further destruction. And that is the probable reason why syphilitic disease of the brain and nervous system generally is considered a favorable form, considering the gravity of the symptoms; but if we take a case in which the syphilitic disease has gone on to produce destruction of the nerve-tissues, we shall have but little more reason to expect recovery than in a case due to any other lesion. It is the fact that in the syphilitic case we may hope to interrupt the process which is going on, and which, if let alone, would produce still more decided destruction, that gives us greater encouragement in this form of disease of the nervous system. If we take such a case soon enough, before a great amount of injury has been done to the nervous tissue, then it will end in pretty complete recovery. But I think the idea that syphilis is a benign disease as far as the nervous system is concerned, is one which has been rather exaggerated.

We undoubtedly have in this condition, where it is allowed to continue, some of the most unfortunate cases and most unsatisfactory results, although there is nothing more brilliant than the effects we can obtain in some cases by appropriate treatment in cutting short many of the symptoms of intracranial syphilis.

THE cholera having crossed over into Italy, its ravages are greater there than in France. The daily papers recently reported over eight hundred cases daily at Naples, with a large death-rate.

ORIGINAL COMMUNICATIONS.

BORO-GLYCERIDE, THE NEW ANTI-SEPTIC.

BY WILLIAM THORNTON PARKER, M.D.
(MUNICH),

Acting Assistant-Surgeon, U.S. Army.

THE development of antiseptic surgery by Lister, which was indeed one of the greatest triumphs of modern surgery, gave to the medical profession an undue amount of confidence in carbolic acid. The true source of the great surgeon's success was apparently lost sight of, and the idea became prevalent that carbolic acid in continuous contact would protect almost any wound from an unfavorable result.

Esmarch has demonstrated that "the first and most important principle in the treatment of wounds is to keep at a distance *all injurious influences* which can hinder or retard their healing."*

It was the accomplishment of this principle in Listerism which, in spite of the carbolic acid, gave it such great success and revolutionized surgery in the treatment of wounds.

The good results went forward until at last their limit was reached, and, in the wild extravagance of the carbolic acid folly, the dangers from poisoning by this agent were at last demonstrated. A reaction from the "Lister fever" set in, and "*Fort mit dem Spray!*" was to be heard from every side.

The absorption of carbolic acid by the wound-surface and by the lungs of the patients, and the undeniable symptoms of severe injury, with the occasional occurrence of even fatal results, caused general alarm.

Whatever may be the defects in Lister's system of antiseptic surgery, its good results will continue for all time, and the gratitude of countless sufferers will be due to him for his great discovery.

Where carbolic acid had formerly received the enthusiastic support of surgeons, a terror of its presence now appeared, and new and better antiseptics were sought for in every direction. Most notably, iodoform was experimented with, and, good results being obtained, it too enjoyed a brief season of extravagant flattery. Among these more recent substitutes proposed was boric acid, in solution or in combination.

* The Surgeon's Hand-Book, Esmarch.

The use of borax in the treatment of wounds and as a valuable preservative has been known from the earliest times, and almost every work on surgery acknowledges its valuable antiseptic properties.

It has been recommended for years, in solution, in powder, in ointment, for the treatment of wounds, burns, and sores of all kinds; and yet, when the dangerous properties of carbolic acid in wound-treatment had been proved over and over again, and no satisfactory substitute discovered, borax still remained in quiet obscurity.

In 1882, after having witnessed the unsatisfactory workings with carbolic acid and iodoform in Continental hospitals, I had the pleasure of seeing the new antiseptic, boro-glyceride, in use at the Charing Cross Hospital, London.

In 1870, after I had followed the clinics of Lister in Edinburgh and shared in the general enthusiasm over carbolic acid, and after experiencing the discouragement which came to so many in after-years, and which, in fact, at last amounted to a revulsion against the carbolic acid, I was less ready to believe that in the new antiseptic, boro-glyceride, there was anything more than a temporary favorite.

However, I noticed that "the worst cases" were given to boro-glyceride, and the best to iodoform and carbolic acid; but the comparison of the conditions of the wounds left no doubt in my mind as to which of the three antiseptics was certainly the most reliable and the best in every way.

Under the boro-glyceride treatment the wounds soon presented a healthy appearance; and the naturalness of color and the absence of any signs of inflammation, together with the cheerful, comfortable condition of the patient, were very obvious.

"In my observation and experience, in the boro-glyceride treatment I noticed *no increase of temperature*: in other words, no poisoning, as in the case of carbolic acid and iodoform treatment."* The wounds take on a healthy and cleanly appearance, healing rapidly.

Concerning the chemistry of the preparation, boro-glyceride is said to be of definite chemical composition ($C_3H_5BO_3$), forming a hydrate when diluted with a

large quantity of water. In a solution of one in twenty or thirty it is not decomposed; it has a slight salty taste, is inodorous, and is entirely unirritating to a wounded surface, even when kept constantly applied.

It is impossible to overestimate the importance of having a reliable preparation of boro-glyceride. As soon as its merits became known, many druggists attempted its manufacture, with varying degrees of success. Its apparently simple formula deludes many, and, partly on account of the belief that it can be easily and quickly made, and partly because ordinary and even inferior ingredients are used when the purest are required, many worthless compounds have been made and sold as boro-glyceride.

A leading firm in New York City, whose preparations are generally beyond criticism, sent me a preparation of boro-glyceride which they had made, instead of sending for the particular kind I had ordered. It proved to be absolutely worthless, being little better than a mixture of boric acid and glycerin.

I regret to say that I have been unable to obtain satisfactory samples of boro-glyceride except from Theodore Metcalf & Co., of Boston, Massachusetts, whose preparation, in my opinion, is the finest in the market. Various mixtures of borax and glycerin, and also of boric acid and glycerin, simply mixed, have been falsely called boro-glyceride. The superiority of the preparation of Messrs. Theodore Metcalf & Co., I have been informed, is due to the fact that they use only pure glycerin and imported English boric acid in its manufacture.

Surgeons using these inferior compounds have failed to bring out good results with them, and it is not to be wondered at that, failing once or twice, they have abandoned this valuable antiseptic, and have even condemned it as no better than its predecessors; and yet I firmly believe that the time will arrive when its true merits will be recognized and a discrimination which can only be brought about by experience used in its selection.

It is not the object of this paper to advocate any one firm as the best manufacturers of the new antiseptic, boro-glyceride; but up to the present time the only preparation which has proved satisfactory in my experience in this country has been

* New York Medical Record, September 23, 1882. Communication on "Boro-Glyceride," by the writer.

the one already mentioned. It will afford me great pleasure to bear witness to the excellence of any other preparation of boro-glyceride than that which I am in the habit of recommending at present, if equalling this in purity.

Of five samples from other firms of good standing, only one at all deserved the name of boro-glyceride, and even that one was very carelessly manufactured. Undoubtedly, a good preparation of this antiseptic is expensive, and must continue to be so until its merits have been more fully understood and brought into practical use by the medical profession. It is somewhat surprising that, in this eager hunt for a safe and effective antiseptic during the past ten years, its valuable properties have until recently remained in obscurity.

Besides the valuable properties of boro-glyceride as an antiseptic after surgical operations, I have already, in previous articles, called attention to its usefulness in many diseased conditions as an application of great value. I have recommended its use in gynecology, in solution as an injection for leucorrhœa, vaginitis, etc., and also pure boro-glyceride suppositories.*

It is an excellent application for ulcerated cervix, spread thickly on the diseased surface. It can also be spread on absorbent cotton and introduced and applied in that manner. After considerable experience with the various preparations used for local treatment in these disorders, I find none yielding such satisfactory results as the boro-glyceride. The cleanliness and the gentleness of this remedy, and the steady improvement resulting from the use of boro-glyceride, will be very satisfactory to both patient and physician.

Messrs. Theodore Metcalf & Co. have, at my suggestion, made vaginal and rectal suppositories of boro-glyceride in combination with gelatin, and pencils of the same for intra-uterine and other uses. These contain twenty-five per cent. of boro-glyceride. (See Fig. 1.)

The accompanying illustration explains very clearly their shape and general appearance. The suppositories are of three sizes,—Nos. 1, 2, 3.

No. 1, the smaller, is a useful suppository in various rectal disorders, particularly in piles, and I have also used them

with great success in the treatment of "thread-worms."

No. 2 is of medium size, and can be used either for the rectum or for the vagina.



FIG. 1.

Where a larger amount of boro-glyceride is required, in cases of chronic leucorrhœa, vaginitis, or uterine disease, No. 3 suppository is indicated.

The larger suppositories should not be used more than three nights in succession, and experience has taught me that the best results are obtained usually by using them every other night.

I require the patient to use a vaginal injection of hot water just before going to bed. I recommend the use of my vaginal syringe, on account of its safety and the copious amount of water it is capable of throwing into the vagina at each compression of the large bulb. The tubes are valuable on account of their large size and many apertures, and, being made of pliable rubber, are not so injurious to the patient as the tubes generally in use. (See Fig. 2.)

"This syringe is made entirely of rubber, and the vaginal and rectal tubes are perfectly flexible. There is no terminal orifice, but the sides are perforated with 'velvet eyes' for a distance of nearly two inches from the end. These rubber syringe-points do not lacerate the mucous membrane, nor produce the injury so often caused by the hard metallic tubes. The bulb and tubes are large and insure a copious supply of water."†

The injection is best taken in the recumbent position in bed, and this has been made possible by the invention of "Dr.

* American Journal of Obstetrics, February, 1884. Boro-glyceride.

† New York Medical Record, July 5, 1879.

THERAPEUTICS AND MATERIA MEDICA.

BORATE OF QUININE.

AMONG the new salts of quinine are some that deserve a trial, being cheaper than the officinal salts and more easy of administration. The borate is an amorphous, yellowish powder, of a mild, not very bitter taste. It is much more soluble than the sulphate, dissolving, it is said, in an equal bulk of water. In some experiments conducted by Drs. Finkler and Prior, of Bonn (*Deutsches Med. Wochenschrift*), it was found that it agreed very well even with irritable stomachs, and produced no unfavorable effects upon digestion, even after several weeks' administration. It had the decided antithermic powers of the officinal salts, but caused less nervous depression, and tinnitus aurium was not noticed. It was especially recommended that when given in large doses (varying from eight to sixteen grains every hour or half-hour until forty-eight grains were swallowed) it should be well diluted, and accompanied by a little brandy. Borate of quinine seems especially adapted for treatment of children's diseases, as it is very soluble, and, on account of its mild taste, is easily administered.

TANNATE OF CANNABIN.

Experience has served to support still further the claims of this drug as a pure hypnotic. Dr. Trohmüller (*Allgem. Med.-Chir. Zeitung*) reports excellent results from its use in insomnia of phthisis and various other diseases. He considers it a powerful rival to opium (in doses of one to five grains), as it has no effect upon the secretions and is less likely to cause toxic effects.

ANTIPYRINE.

Favorable notices have appeared lately in the journals upon the new derivative of chinoline, known as antipyrine, discovered by Dr. Knorr,* of Erlangen, who has kept its method of manufacture a secret for the present and patented it, but promises a future communication on the subject. It is said, also, to be made synthetically by the reaction of acetic ether on aniline.

The drug is in the form of a white crystalline powder, very soluble in water (one to three), with a feeble odor, and a slightly bitter taste easily covered by some aromatic

water or wine. Professor Filehne, having given the new remedy a trial in various febrile affections, acute and chronic, found that by doses of five or six grammes a high temperature was quickly reduced to the normal. These doses were generally well borne, but occasionally vomiting occurred, the precaution being taken to give the drug in ten-gramme doses each hour until the desired amount had been administered. The duration of the effect is variable, but usually the temperature does not again increase until seven or nine hours afterwards, and sometimes the result is prolonged for eighteen or twenty hours. The temperature commences to fall within half an hour after the first dose, and its maximum effect is attained from three to five hours afterwards. In children, debilitated patients, and phthisical cases, it is advised to give smaller doses. The frequency of the pulse decreases at the same time with the temperature, but without following any rigid proportion. No albumen has been found in the urine, nor has this fluid shown any marked change of color under its use. Respiration also appears to be uninfluenced by it.

Subsequent experiments made by Drs. May, of Cologne, and Rank, of Stuttgart, have confirmed the preceding observations as to the antipyretic action of the new drug. In order to avoid vomiting, which occasionally will occur, Dr. Rank has tried hypodermic injections of the drug: the solubility in cold water (one to three) requiring too large doses for hypodermic injections, he used warm water, fifty centigrammes of which will dissolve one gramme without precipitation upon cooling, the solution remaining for a week perfectly limpid. Used in this way, antipyrine no longer caused vomiting, while at the same time producing the usual effect upon the temperature. In not a single case was there any accident to report, not the least inflammatory reaction, and no abscesses.

Dr. Rapin reports,† however, that Erb tried the hypodermic method, but gave it up on account of the severe pain caused by these injections: he did this the more willingly because the remedy rarely disagrees with the stomach.

From the results obtained in Erb's cases, it was concluded by Dr. Rapin‡ that anti-

* Zeitschrift für Klinische Medizin, Bd. vii. Heft 6.

† Revue Médicale de la Suisse Romande, No. 7, 1884.

‡ Loc. cit.

pyrine is superior in its antipyretic action to all the agents ordinarily given to reduce combustion, such as quinine, salicylic acid, kairine, etc.; the results obtained from its use are more complete, and the absence of all evil effects after its ingestion constitutes an additional advantage. Finally, its price is much lower than quinine; but this advantage is merely a nominal one at present, because of the larger quantity required to produce the same effect.

The mode of action of antipyrine is in all probability very analogous to that of kairine, which has been found by Mr. Loyd to reduce greatly the amount of gases taken up by the blood, and particularly of oxygen, the spectroscope showing attenuation and disappearance of the bands of oxyhæmoglobin. Should this prove to be true as applied to antipyrine, it would tend to impair its value in typhoid and other low fevers which tend in a marked degree to destroy the blood-corpuscles. M. Quinquand* found that the amount of gas in the blood is not materially affected by small doses of kairine, but it is by large doses. Since these remedies possess some of the properties of quinine, it is possible that they may also exert a toxic action upon the heart, which might render them dangerous in cases of depression of the vital powers, when given in large doses.

SALICYLIC ACID IN THE TREATMENT OF CEREBRO-SPINAL MENINGITIS.

Having been impressed, during an epidemic of cerebro-spinal meningitis, with the idea that an analogy existed between that disease and acute rheumatism, Dr. Ramsey† was led to use salicylic acid in its treatment. During the epidemic mentioned, eleven cases of cerebro-spinal meningitis occurred in his practice. Four of them were treated with ergot, potassium bromide, chloral, aconite, quinine sulphate, morphine sulphate, and numerous other remedies: the result was three deaths and one recovery. The seven other cases were treated with salicylic acid, with the result of five recoveries and but two deaths. They were all violent cases, and possessed the distressing characteristics of the disease in full. He says that salicylic acid will control the migratory pains of head, elbow, and knee, and reduce the temperature, in most, if not all, cases of cerebro-spinal meningitis, and that in every case in

which he prescribed it he perceived great benefit in the condition of the patients from the beginning of its use.

SOME THERAPEUTIC USES OF LOBELIA.

In a recent communication to the Société de Thérapeutique, Dr. Fournier‡ states that he has successfully used the tincture of *Lobelia inflata*, in doses of ℥xv-xxx, in several cases of cardiac dyspnoea and in two cases of pulmonary congestion, and with good results in the third stage of phthisis. As lobelia alone is nauseating, it should be combined with polygala. Huchard uses the following formula, which is well borne by his patients:

℞ Potassii iodidi, ʒij;
Tinct. lobeliæ,
Tinct. polygalæ, āā fʒij;
Extract. opii, gr. iss;
Aquam destillatam ad fʒviiij. M.

Dose, a tablespoonful morning and evening in chronic bronchitis and asthma.

M. C. Paul has used lobelia and iodide of potassium with success in catarrhal asthma, giving ℥xx of tincture of lobelia to gr. viii of iodide of potassium.

ASCLEPIAS INCARNATA.

Dr. J. Hosack Fraser,‡ after three months' clinical trial of the American diuretic drug, *Asclepias incarnata*, or white Indian hemp, thus summarizes its physiological actions:

1. *On the Circulatory System.*—It stimulates the cardiac contractions and increases the blood-pressure. For two hours after the administration of forty minims of the liquid extract, there is an increase in the strength and volume of the pulse. It steadies the cardiac contractions, and assists in restoring the rhythm of the pulse when any irregularity exists. The stage of stimulation is sometimes followed by slight depression of the circulation, and, in order to maintain its stimulating effects, it should be repeated at intervals of three hours.

2. *On the Urinary System.*—It is a speedy, potent, and reliable diuretic. He has found it to succeed admirably in cases where the best known diuretics had entirely and signally failed. It is invaluable in all forms of dropsy, but especially so in dropsy of cardiac and renal origin. He believes that it acts on the kidneys in precisely the same manner as digitalis. One

* Progrès Médical, May 10, 1884.

† Western Med. Reporter, March, 1884.

‡ Practitioner.

§ Ibid.

great advantage which it possesses is that it does not cause any gastro-intestinal disturbance: on the contrary, it frequently acts as a stomachic tonic.

The root is the part which is used in medicine, and is said to possess all the medicinal properties of the plant. It may be administered in the form either of an infusion or of a fluid extract. The latter preparation should be given in 3ss to 3i doses every three hours. Smaller doses are useless.

F. W.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL COLLEGE OF MEDICINE, LOUISVILLE.

CLINIC OF PROF. DUDLEY S. REYNOLDS, M.D., PROFESSOR OF GENERAL PATHOLOGY AND DISEASES OF THE EYE, EAR, AND THROAT, HOSPITAL COLLEGE OF MEDICINE, MEDICAL DEPARTMENT OF CENTRAL UNIVERSITY OF KENTUCKY, LOUISVILLE.

Reported by ALLEN KELCH, M.D.

SYMBLEPHARON FROM CAUSTIC.

A. N., æt. 8 years, residence, Jeffersonville, Indiana, in June, 1883, had the misfortune to get some concentrated lye into the left eye, between the lower lid and the ball. The extent of the burn corresponded to the surface of the lower lid, and penetrated to the depth of the entire conjunctival covering of the corresponding surface of the ball. The eye was bandaged by the skilful hand of a specialist, who changed the dressing daily and instilled atropia drops. This, of course, subdued the pain and at the same time secured union of the lid to the denuded surface of the ball. In the central part the point of attachment took place at a point just above the pupillary margin, fully covering the anterior pole of the cornea. The eye was drawn down by its attachment to the lining of the lower lid, the inferior cul-de-sac being completely obliterated; motion of the ball was correspondingly limited. The tension of the cicatrix was such as to permit slight motion of that part of the lid attached to the cornea. On the 23d of April, 1884, the boy was chloroformed at Saint Joseph's Infirmary, and, with the assistance of Dr. Leo Harrison, of Paris, Texas, I proceeded carefully to dissect off the lid from the cornea, and then, dividing the ocular conjunctiva at its line of attachment on each side to the adherent lid, cut down to where the inferior retrotarsal fold should lie, dissected off the adherent lid

from its attachments to the sclerotica, to which it was firmly united; reaching the point of attachment of the tendon of the inferior rectus muscle, the ocular fascia was for the first time brought to view. Having dissected off the lower lid as far down as I desired, I divided with curved scissors the conjunctiva at its point of attachment with the cornea around to the summit of the cornea, first on the outer side, then upon the nasal side in the same manner, to a point about one line from the termination to the point of incision with the opposite side. With the scissors I then cut obliquely upward, so as to leave a triangular flap or portion of ocular conjunctiva with its apex attached to the cornea and its base corresponding to the retrotarsal fold. Dissecting this up carefully upon each side, I was provided with quite elastic flaps of sound ocular conjunctiva, which were drawn down and stitched together in a vertical line from the inferior corneal margin down to the inferior sulcus. I then passed at the most inferior portion a suture through each of the two flaps of conjunctiva down through the deep orbital fascia, so as to secure a mucous surface in contact with the lining of the lid, throughout the whole extent from the position where the inferior cul-de-sac should lie quite up to the corneal margin, allowing the raw surfaces upon the lateral and superior portions of the globe to heal by granulation. The eye was not bandaged, but treated by almost constant ablutions of cold water. But little swelling occurred in the lower lid, the motility of the globe was at once and permanently restored, no disposition to abnormal adhesions was renewed, and on the 28th of April, the wound having healed throughout, the stitches all having come away, and the eye being entirely free from irritation, the patient was allowed to go home, with instructions to report at the end of a week.

On the 12th of May I saw him. The eye had recovered, the ocular conjunctiva having been renewed over the surface of the globe. The sclerotica was almost as distinctly and clearly white in this as in the other eye, which was perfectly sound. The cornea showed no sign of opacity to the naked eye, yet oblique illumination clearly disclosed the original point of attachment. Had the destruction of corneal tissue extended beyond the anterior elastic layer, no such good result as this

could have been obtained. In the beginning the corneal wound being limited to the epithelium allowed the denuded lower lid to attach directly to the surface of the anterior elastic layer, and in dissecting away the abnormally adherent lid the anterior elastic layer of the cornea was removed. The opacity resulting from wounds penetrating to this depth only is usually very slight, but whenever the proper substance of the cornea is invaded, then the opacity resulting from the disturbed relation of the connective-tissue laminae and of the lymphatic system is such that new connective tissue can never be depended upon to assume the uniform direction and relation of fibre necessary to the formation of a transparent structure. The chief point to be insisted upon in all wounds of the eye, whether by caustic contusions or the tearing away of the surface-tissues, is to treat them without closing the lids. There can be little doubt that the damage in this case was chiefly due to the careful and persistent efforts to keep the lids closed.

In the case of a plasterer who, a month ago, had the misfortune to get caustic lime in his eye, a large quantity of it being impacted between the lower lid and the ball, extensive loss of substance occurred from the violent caustic action of the lime. It was all cleaned out as carefully as possible with a little brush of cotton-wool rolled upon the end of a probe and dipped in vinegar. After this a quantity of pure vaseline was placed between the lid and the ball, and a solution of hydrobromate of homatropia (one grain to the drachm of water) was instilled every hour. The patient was directed to keep his eye open and bathe it freely in cold water every hour, then to instil the homatropia, after which the vaseline was to be applied. He wore smoked coquilles to protect the eyes from the light, and was directed not to confine himself to the house. He reported at the office daily for a week, then every other day, and in two weeks from the time of the injury the eye was entirely well. There was still a pink discoloration of the inferior half of the globe, the cornea, however, being quite clear. The inferior cul-de-sac was shortened considerably, though not enough to produce discomfort or any external sign of the extent of the injury which he had suffered. The almost perfect transparency of cornea and the ab-

sence of symblepharon may fairly be attributed to the course of treatment pursued. Surely the extent of the injury here inflicted was quite as great, both as to the depth to which the caustic penetrated and the surface it occupied. These two cases, coming as they do together and representing the antipodes of surgical treatment, offer results sufficiently striking to demand the general attention of all practitioners who are called upon to treat injuries of the eye.

TRANSLATIONS.

A FRENCH CRITICISM ON KOCH'S CHOLERA-BACILLUS.—At the meeting of the Académie de Médecine, August 5, a report was read by M. Strauss for himself and M. Roux, containing a summary of the labors of the French Commission in Egypt and in Toulon. It declared that the disease in France was identical in its morbid anatomy with that in Egypt. With regard to the supposed specific organism giving rise to cholera, it stated that in the intestinal mucous membrane there were found a variety of forms of bacteria, especially when the case was prolonged; but in the very rapid cases these organisms are much less numerous, and in the most acute *it is impossible to detect their presence*. Following the method of Weigert, adopted by Koch, the Commission declared that "in a goodly number of cases of cholera the micro-organisms cannot be found in the intestinal tunics." The comma-bacillus which Geheime Koch considered as being the cause of cholera was also recognized by Messieurs Strauss and Roux, though it was not constant, and was generally less numerous than other micro-organisms. Conceding to these bacilli *en virgule* an important rôle in cholera, at the same time they claim that other organisms are equally present, and sometimes in numbers so large that neither seems to preponderate. It is also claimed that these organisms are not peculiar to cholera, but have been met with in dysentery, as reported by Malassez. In leucorrhœa, and in the discharge from a case of uterine epithelioma, M. Strauss had also found microbes similar to those mentioned. The reporters conclude with the statement that if the comma-bacillus be the true cause of cholera it inhabits only the intestinal con-

tents, and in the most rapid cases it does not invade, to any appreciable extent, the mucous membrane. It is necessary, then, to admit that, in order to produce effects so rapid and so intense, it acts by secreting a soluble ferment, a ptomaine, or a poison of some kind, which, being absorbed, provokes the symptoms of cholera. It is of interest that pure cultures should be made and examined for such poison; it would also be important to ascertain if the comma-bacillus occurs in cholera nostras. The peculiar and extremely minute particles found in the blood of cholera patients in Egypt by the French Commission were also detected in the blood of patients at Toulon: they were attributed to a special alteration of the hæmoglobin.—*Le Progrès Médical*, No. 32.

THE EXPERIMENTAL PRODUCTION OF TYPHOID FEVER.—Dr. Luigi Petrone reports the following interesting observation in *Lo Sperimentale* (April, 1884). A patient, 22 years of age, suffering with typhoid fever, towards the end of the first week had a temperature of 40.3° C. (104.5° F.), when an ounce of blood was taken by a leech. Under microscopical examination the reporter found very few spores, a few short bacilli, many spiral forms and threads, joined together in bundles, all of which forms took staining remarkably well with Weigert's fluid. The next day the blood was injected into two dogs by hypodermic injection. By the next day there was increase of temperature, thirst, and muscular prostration, which were soon associated with anorexia, diarrhoea, tenderness of the abdomen, particularly in the right iliac region, swelling of the spleen, and tympanites. Twelve days after the injection had been made, both animals succumbed. The autopsy revealed recent swelling of the spleen, enlargement of the mesenteric glands, which were decidedly infiltrated; the solitary follicles and Peyer's gland were swollen, and in the lower part of the ileum the mucous membrane was ulcerated. The blood contained micrococci, bacilli, and threads. In fresh preparations of the liver, spleen, large bowel, and Peyer's glands, there were seen infiltrations of bacilli and spores, with spiral-formed threads.

From each of the dogs about fifteen grammes of blood were drawn and successfully injected into two other dogs, and

autopsies of the fatal cases showed a result identical with the foregoing.

Recalling the experiments of Klebs and Tizzoni, the reporter draws the following conclusions from his experiments:

1. The blood of typhoid patients (*typhus-kranker*) is septic, and is capable of infecting animals into which it has been introduced by injection.

2. The infection succeeds immediately in dogs, by means of the blood, without any prodromic symptoms.

3. Clinically, the infection reveals itself in dogs by high, continued, remitting fever, and through a typhoid condition, as it is developed in man.

4. The anatomical alterations found in the experimentally-excited typhoid were developed and maintained by means of small parasites, which were present in the form of spores, bacilli, and a thread-like mycelium.—*Deutsche Medizinisch-Zeitung*.

EXAMINATION OF BLOOD FOR MICRO-ORGANISMS.—After a series of carefully-conducted examinations of the blood of guinea-pigs, dogs, sheep, and calves, Dr. F. Zahn announces that the blood of healthy animals is free from putrefaction-germs.—*Virchow's Archiv*.

EXTRACTUM STIGMATUM MAIDIS IN HEART-AFFECTIONS.—Thus far the extract of maize stigmata has been used only to a small extent in this country, and chiefly for the relief of irritable bladder. Dupont reports good effects from the use of the solid extract in doses never exceeding three grammes, given before eating, three times daily. Generally, about one-half of this amount, given in syrup and water, rapidly produced a diuretic effect. The amount of water sometimes increases to a marked degree, an excretion of five hundred grammes being increased to as much as fifteen hundred to two thousand grammes. He considers it especially valuable in œdema with heart-failure. It appeared to be well tolerated in all the cases in which he had employed it. Its action on the heart resembles that of digitalis, but less so than it does that of convallaria. He recommends a combination of the drug with bromide of potassium and iodide of potassium, with which it may be given in milk.—*Centralblatt für die Gesamte Therapie*. [We have found the syrup a pleasant and efficient form in which to administer this remedy.—ED.]

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 20, 1884.

EDITORIAL.

PUBLISHERS' NOTICE.

WITH the issue for October 4, 1884, THE PHILADELPHIA MEDICAL TIMES will commence a new volume and will enter upon its fifteenth year of continuous publication. Having attained to twice the average life-period of American medical journals, the publishers are encouraged to believe that THE TIMES has been found by its patrons to possess qualities that commend it to favor quite above the average of its class. In consequence of the liberal support which it has received from the profession, it has been enlarged as circumstances seemed to warrant it; and, indeed, the volume for the year now about to close contains a greater number of pages than any which has preceded it. This increase in the size has been rendered necessary principally by the greater number of original articles secured for its pages (many being illustrated), which have enabled the editor to present an exceptionally complete variety in the department of *Original Communications*.

In addition to the Clinical Lectures and Hospital Notes, which contain much practical information not to be found elsewhere, the volumes of THE TIMES contain many interesting medical society reports and accounts of meetings of National Associations, while reports of the recent advances in medical science are given by a corps of collaborateurs possessing especial qualifications for the work; these reviews being supplemented by short translations from journals in foreign languages and abstracts from current English and American periodicals. Special correspondents have also contributed much to the interest and

value of THE TIMES, notably Dr. J. Milner Fothergill, of London, whose monthly letters have become a prominent feature.

Intending to retain all the desirable features that have characterized THE TIMES in the past, and in future to embody others as opportunity may offer, the publishers have the pleasure of announcing that, in accordance with the general tendency towards a reduction in prices, the subscription price for the coming year will be reduced to Two Dollars (\$2.00), beginning with the first number of the new volume, October 4, 1884, without, however, reducing in any way the quantity or the quality of material furnished to its readers. It is believed that this reduction will be acceptable to its subscribers, and will make the PHILADELPHIA MEDICAL TIMES by far the cheapest first-class medical journal published.

HETEROTAXIA.

CONGENITAL transposition of the organs of the body is an anomaly of development less infrequent perhaps than we have been in the habit of thinking it. It is of interest theoretically on account of our absolute ignorance of the way in which it comes to pass. Dareste's view that it results from the turning of the embryo-heart towards the left instead of towards the right, which is normal, and the suggestion of Bischoff that it is due to a change in the normal position of the umbilical vesicle and the allantois, so that the former turns to the left and the latter to the right, are mere suggestions, and scarcely amount to explanations even were they proved. This condition is of interest practically by reason of the effect it may exert in obscuring diagnosis, especially in cases of actual disease of the thoracic organs seen for the first time. We well remember the perplexity that arose when, years ago, Schröter, in Vienna, used slyly to present to his ward classes in physical diagnosis a case of

transpositio viscerum. Dr. Alfred Richter, of Dalldorf, recently demonstrated the specimens of a case of this kind before the Medicinische Gesellschaft in Berlin, and, in connection therewith, presented some facts of a statistical nature that will not be without interest to our readers.

He had collected (including the case in question) forty instances of this malformation, most of which were fully described, a few merely referred to. Of these, nineteen were males, sixteen females, and in five the sex was not given. Of the forty examples, twenty-four were examined after death,—eight males, eleven females, and the five whose sex was not given. In two of the forty cases the age was not recorded, nine died shortly after birth, twenty-nine reached a more or less advanced age. The average age of twenty-two cases in whom the age was stated was thirty-five years. Of the twenty-four cases examined after death, in two the age was not stated, nine were children, thirteen were adults, and of these thirteen in nine the age was known and the average was thirty-eight years.

Of the nine who died shortly after birth, in two death resulted from other malformations of the heart, in two from other malformations elsewhere, in two of disease, and in three the cause of death was not stated.

With reference to the intellectual development, of the twenty-nine adults it was said in one instance that the development had been tardy; in one that there were convulsions followed by unconsciousness and headache, and on post-mortem examination an apoplectic clot; one case was that of a murderer, one that of a female thief. In the case in question the mental condition had been fairly good until acute delirium arose in consequence of syphilis of the cranial bones. Finally, in twenty-four of the twenty-nine adults no mention was made of abnormal mental conditions.

Left-handedness was observed in a single

case only. This fact is of no little interest. It would be easy to conclude *a priori* that the speech-centre might be situated in these cases in the region of the island of Reil on the *right* side.

Of the twenty-four cases examined after death, seventeen were instances of complete transposition of the organs, in five the heterotaxia was incomplete, and in two there was no definite statement on this point; six (of whom four were children) had serious cardiac lesions; in three the heart was stated to be sound, and in fifteen there was no note of the state of the heart.

With reference to the hereditary transmission of this malformation nothing has been determined. In seven of the above forty cases the subject was investigated without result; in thirty-three it was not touched upon.

Dr. Richter concludes that, in the absence of special heart-complications, heterotaxia is a morphological variation which exercises no unfavorable influence upon either health or length of life.

The occurrence of transposition of the heart while the other organs retain their natural positions is extremely rare: nevertheless Breschet saw four instances of this malposition in newly-born children, Otto refers to similar cases, Pope (*Lancet*, July 8, 1882) describes one in which the heart's apex was simply turned to the right instead of to the left, without other change in the development of the organs, and Bramwell narrates a case, which was not examined after death.

THE NEW PROFESSOR AT JEFFERSON MEDICAL COLLEGE.—The appointment of Prof. Mallet to the vacant chair of Chemistry in the faculty of the Jefferson Medical College is one which will add strength to the school and will do much towards retaining for this city its old-time prestige as a medical centre. A graduate of Göttingen (Ph.D.), of the University of Louisiana (M.D.), and of William and Mary (LL.D.), a member of various scientific societies, and, until recently, Professor of Chemistry in the University of Virginia, Dr. Mallet brings culture, high reputation, and distinguished ability to his new position.

PROCEEDINGS OF SOCIETIES.

AMERICAN DERMATOLOGICAL ASSOCIATION.

THE Eighth Annual Meeting convened at Highland Falls, New York, on Wednesday, August 27, and adjourned on August 29, holding two daily sessions, except upon the last day.

The President, Dr. R. W. Taylor, of New York, called the meeting to order on the morning of the 27th, and, after receiving the report of the Council with regard to the selection of the place of meeting and some other items of business, the Association listened to a brief introductory address by the President, in which, after extending a welcome to those in attendance, the speaker reviewed the work of the Association and congratulated the members upon its high standing in its special department. The meeting being formally opened for scientific work, Dr. Hardaway, of St. Louis, reported a remarkable case of xanthoma multiplex. The patient, 44 years of age, had been well until thirty, with the exception of hyperidrosis of the feet, which was an old complaint. His work requiring him to stand over a hot fire for eight hours a day, he had been subject also to general and sometimes excessive sweating, which finally gave way to burning and itching. Two years later, he noticed a yellow discoloration on the body and his health became poor, and when he came under Dr. Hardaway's observation, some years later, his right side was bronzed, his left side yellow. The itching, which was sometimes intolerable, had existed for twelve years. His urine contained a trace of sugar, but nothing else abnormal. The liver was much enlarged downward and laterally, and appeared to be thickened and nodulated. The skin was bronzed and almost black in some places; the conjunctivæ were also stained. On the eyelids, lips, and chin were numerous well-marked patches of xanthoma. Around the elbows, on the wrists, the backs of the hands, and the feet, also on the buttocks, thighs, and legs, were a large number of xanthoma-tubercles, varying from a pin-head size up to that of a hickory-nut, some being umbilicated, and a few on the face perforated by hairs. The palms of the hands also presented many small tubercles and bands of yellow infiltrated tissue. A number of subcutaneous tumors were also found, and a distinct bony node was noticed over the front of the head of each tibia. The body was nearly free from tubercles, but a few existed on the right side over the ninth and tenth ribs, having the exact distribution of a herpes zoster. The genitals were involved, notably the glans penis and scrotum; and a few small patches of yellow discolored tissue were found in the mouth, on the mucous membrane of the inner side of the cheeks and the soft palate, and also of

the larynx and trachea. The lesions of the skin did not cause annoyance, except that the tumors were the site of itching which involved the white skin.

The striking points in the case were the antecedent bronzing before the tumors appeared, their symmetrical character except on the trunk, and the peculiar distribution on the chest, simulating herpes zoster and suggesting nervous origin. The subcutaneous tumors and bony nodes were also of great interest.

From a study of this and other cases, and a review of the literature of the subject, he was inclined to look upon xanthoma as a diathetic affection, considering the connection with derangement of the liver as entirely secondary. He believed that when jaundice occurred it was due to a deposition of tubercles in the liver. He was also inclined to believe that in persons with what he called the xanthomatous diathesis, any prolonged irritation would cause a development of tubercles at points subjected to chafing, as over the articulations, on the eyelids, etc. In concluding, he expressed the opinion that the lesions in the chest-wall might be due to an abortive attack of herpes zoster.

In the discussion which followed the paper, the diathetic explanation of the origin of the disease was generally discredited. The concurrence of jaundice was considered exceptional. Dr. Duhring noticed that pruritus began with the jaundice and antedated the xanthoma. He had also been interested in tracing a possible relationship between growths of this kind and those of a different character occurring in urticaria pigmentosa; some of the latter were true urticaria, with lesions of marked persistency, others seemed to partake of the xanthomatous nature, with pruritus and pigmentation, and the formation of papules and tubercles, with some of the characteristics of urticaria. The latter he considered identical with what Tilbury Fox had described and figured as "xanthelasmaidea."

Dr. Hardaway, in conclusion, said that the osseous lesions and subcutaneous nodules were of great interest, and were involved in obscurity. He had found only one writer, Calcott Fox, who spoke of similar alteration of the bones in one case, which he attributed to gout or rheumatism.

Dr. J. Nevins Hyde, of Chicago, read a communication entitled "A Clinical Study of Lupus Erythematosus as it affects the Hand." Four patients coming under the observation of the lecturer were the basis of his remarks. Three were females, one a male. In each the disease appeared in discoid variety upon one hand; one only had facial lesions, coming on some years later than the full development of the disease on the hand. In several of the cases the fingers were involved in the disease; in one the palm was invaded. From a review of the published cases, which had been all recorded by English or American ob-

servers, the lecturer observed that the age of the patients was usually over twenty years, and that about two-thirds were women, as also noticed by Kaposi.

In the discussion several members mentioned similar cases in which lupus appeared on the hands alone, the patients being apparently otherwise well and free from diathetic taint.

Dr. Sherwell presented a suggestion for the treatment of acne and acne rosacea in the male subject, in which he referred to the observations of Drs. Piffard and Hyde upon the relations of disorder of the sexual organs to acne, and advised examination into the condition of the urethra in these diseases. The lecturer spoke of chronic congestion and hyperæsthesia of the urethra as coexisting in two cases with acne, which, after treatment by the introduction of cold steel bougies, became entirely relieved of their eruption, which before had resisted treatment.

"A Case of Unilateral Chromidrosis (?)" was reported by Dr. James C. White. The patient, a workman in a sugar-refinery, reported that his shirt had been stained a yellow color for several months on the left side from the shoulder all the way down. There had not been excessive sweating, nor was the discoloration found elsewhere. The coloring-matter was an oily substance, readily extracted by ether, and was not due to the presence of bacteria. Local treatment promptly relieved the disorder, which had not returned four months later.

Several similar cases were mentioned during the discussion, and the condition was regarded as genuine chromidrosis. Dr. White said that he had been uncertain whether the coloring-matter had come from the sweat-glands or the sebaceous follicles, and had accordingly queried the title.

Dr. White also reported two cases of supposed arsenical dermatitis, based upon some cutaneous manifestations in a mother and newborn child, and inquired as to the possible connection between wall-paper containing arsenical pigment and the appearance of pityriasis maculata and circinata in the mother. In the infant the symptoms were those of eczema and intertrigo.

In the discussion Dr. Sherwell mentioned a case of bullous eruption of obscure cause, now under treatment, which might be due to some agent similar to that cited by the lecturer.

Dr. White said that the cases of Dr. Sherwell might be due to mosquito-bites. He had seen cases in which the lesions were nearly as large as pigeons' eggs. They occur occasionally in winter, but of course were most common in summer.

The second day's proceedings were opened by a paper by Dr. L. A. Duhring, entitled "Dermatitis Herpetiformis and its Relations to Impetigo Herpetiformis," which was essen-

tially a synopsis of the essay read by him at the last meeting of the American Medical Association. He held that the disorder described by Hebra as impetigo herpetiformis, which usually occurs during pregnancy and is often fatal, and also cases called variously by Hebra pemphigus pruriginosus, herpes chronicus, herpes gestationis, etc., were all identical with dermatitis herpetiformis.

The paper led to a general discussion, in which the rarity and obscurity of the affections were referred to, and the view was generally expressed that many cases hitherto described under various names might with propriety be comprised in the class considered by the lecturer. Dr. Piffard did not consider them allied to herpes, taking zoster as an example. Dr. White suggested *multiform dermatitis* as being more strictly applicable, and did not adopt the view of the speaker that the disease was usually of neurotic origin. Dr. Sherwell thought that some of Hebra's cases were septic. In conclusion, Dr. Duhring defended the qualifying term *herpetiform*, because in most of the cases there was from the first a distinctly herpetic character. The paper was based upon observations of sixteen or seventeen cases which had been for several years under his observation. He insisted that the difference between his cases and those of Hebra was simply one of degree, and not essential.

The evening session was devoted to the discussion of the report of the Committee on Nomenclature.

The third day's session was opened by the President at the usual hour.

Dr. Stelwagon, of Philadelphia, contributed two papers, one on a "Case of Late Cutaneous Syphilis (Acneiform Syphiloderm of the Nose), illustrating the Occasional Necessity for Large Doses of the Iodide," and one on a "Case of Vitiligo involving the Whole Surface." The papers were read by the Secretary in the absence of the author.

Dr. Hardaway, of St. Louis, presented photographs and read the description of a very interesting case of "General Idiopathic Atrophy of the Skin." The patient was 23 years of age, and blind from corneal opacities, necrosis of conjunctiva, and symblepharon. The skin of the face had a rosaceous aspect, being thickened and red; there were scars around the lips, which were also thick and strumous in appearance. The body-surface was checkered and shining, from the presence of many pigmented spots of various sizes, interspersed with atrophic patches, over which the skin was tense and glistening and could be pinched up with difficulty. Dilated or tortuous vessels were not observed. The skin and muscles of his hands also presented a similar condition of atrophy, and the fingers were webbed and adherent for about half their length.

Dr. Robinson, of New York, read a paper

on "Miliaria and Sudamina." After reviewing the conflicting opinions as to the nature of the affections which have been designated by different authors as miliaria alba and rubra, sudamina, eczema solare, and lichen tropicus, he concluded from original microscopical studies that in reality miliaria alba and rubra are forms of eczema, due to local irritation by clothing and acid sweat. He therefore advocated that these terms should be dropped. The disease known as sudamina, he said, was not inflammatory, but was an affection of the sweat-glands, the result of hyperidrosis.

The discussion revealed a diversity of opinion upon the conclusion of the lecture. Drs. Hardaway and Duhring thought eczema a distinct affection from miliaria, chiefly on account of the difference in the clinical history, one being acute and self-limited, the other more or less chronic. Drs. Hyde and White endorsed the view expressed by Dr. Robinson, that miliaria was but an accident of eczema.

The President, Dr. R. W. Taylor, read a description of a "Peculiar Ringed Affection of the Glans and Prepuce." He had seen three cases of the disease in ten years. The patients were free from syphilis, and were from forty to forty-five years of age. Marked neurotic outbreaks ushered in the appearance of this condition. One had an attack of orchiepididymitis, and recurring attacks of balanoposthitis, and in another a chancroid ulcer had been roughly cauterized, which had led to long-continued swelling and inflammation. In each of the cases the disease appeared in the form of rings covered with thin firmly-adhering scales, underlying which was apparently healthy mucous membrane. The lesions were not progressive, but were lasting. They were accompanied by disagreeable sensations, but not by pain. Recognizing the neurotic element, arsenic was given in increasing doses with success. The affection was neither syphilis, tinea circinata, nor psoriasis.

No agreement was attained as to the pathology of these cases in the discussion. Dr. Hardaway had met with a case in a patient who had had psoriasis, but the lesion on the penis was not like that disease. Dr. Wigglesworth had had a case of leucoplakia buccalis, which, after recovering from that disease, had developed a lesion similar to that described in the paper, which had finally disappeared after the application of carbolic acid. Dr. Duhring had seen cases in which the gross appearances and the course of the affection had suggested to his mind the idea of lupus erythematosus. He was inclined to think that the cases reported by the President were of this character.

Dr. Taylor was confident that the cases he had reported were not instances of lupus erythematosus; they did not develop from pap-

ules; there were no recurring attacks of hyperæmia; the patches were not indurated; and there was no cicatrization.

The election for new members resulted as follows:

Honorary Member.—Mr. Jonathan Hutchinson, of London, England.

Active Members.—Drs. George H. Tilden, of Boston; A. R. Morrison, of Baltimore; T. C. Curtis, of Albany; and L. N. Denslow, of Minneapolis.

The following were elected officers for the ensuing year:

President.—W. A. Hardaway, M.D., of St. Louis.

Vice-Presidents.—J. C. Graham, M.D., of Toronto, Canada; A. Van Harlingen, M.D., of Philadelphia.

Secretary.—W. T. Alexander, M.D., of New York.

Treasurer.—George H. Rohé, M.D., of Baltimore.

The date and place of meeting were left to the choice of the Council.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a meeting held June 18, 1884, John B. Roberts, M.D., read a paper entitled

THE DEMAND FOR EARLY EXPLORATORY TREPHINING IN DEPRESSED FRACTURES OF THE SKULL.

In using the term trephining I apply it to all methods of removing portions of the cranial wall, whether by the trephine, saw, burr of the surgical engine, gouge, or cutting-forceps.

From observation, experience, and considerable acquaintance with the literature of the subject, I am convinced that surgeons are induced to decline or postpone the operation of trephining because of a mistaken idea of its serious nature and a misunderstanding of the reasons for its adoption.

The frequency with which successful trephining was done in past centuries without the benefit of our improved methods and instruments, and the infrequency of death or serious symptoms from the operation itself at the present day, convince me that, though a capital operation, it is not one having in it many elements of danger. That many deaths occur after trephining is admitted. Such fatal results must often occur, for injury to the skull-bones is usually and almost necessarily coincident with disturbance or actual lesion of the brain or its membranes. I believe that more deaths are attributable to non-performance or delay in resorting to the performance of trephining than to its adoption. It behooves those who greatly limit the application of the operation to prove, by citation of cases, that a fatal issue has been induced by

the procedure itself in a sufficient number of instances to throw the operation into the class called dangerous. To show merely that many cases of serious skull-injury recover without trephining is not sufficient.

Much controversy on this subject would be avoided if the advocates and the opponents of an extended use of trephining would clearly formulate their opinions as to the theory upon which the operation is performed. In my opinion, trephining should be regarded in the light of an exploratory rather than a therapeutic procedure. I incise the scalp in closed fractures of the skull, not because the incision cures, but because it tells me the condition of the bone, without which knowledge I am unable to treat the patient rationally. The uncertainty of the lesion is, in my opinion, more dangerous to health and life than the conversion of a closed into an open fracture of the skull, because the observation of the profession teaches that open cranial fractures do not resemble in fatality similar open fractures of long bones. In truth, I would be willing to make a closed fracture of the thigh or leg an open one, if it were otherwise impossible to replace fragments which were threatening life. If I but learn the character of the skull-lesion, I am acquainted with surgical expedients that render restoration to health more probable than the complication due to the incision renders it improbable. Hence I am justified, nay, compelled, by my reasoning, to advocate exploratory incisions of the scalp in obscure injuries of the skull.

The same line of reasoning forces upon me the conclusion that I should trephine whenever the fracture, whether originally an open one or so made by my incision, presents the possibility of the inner table being detached and splintered more extensively than the outer. In other words, I should cut the scalp to see the condition of the outer table, I should cut the bone to see the condition of the inner table, in every case where the risk of obscure knowledge is greater than the risk of divided scalp and perforated bone.

Many experimental fractures made in the dissecting-room, and observation of cases in the practice of myself and of others, teach me that extensive shattering of the inner table, with only a moderate amount of fracturing of the external table, is of frequent occurrence in other as well as in punctured fractures. I admit that the condition in the dead subject, with its shrunken brain, is different from that in the living; but there is much evidence of the same splintering to be found in the study of accidental and homicidal skull-fractures. Punctured fractures have long been treated by early trephining to avert encephalitis. For the same reason I recommend resort to trephining in more diffused and less accentuated fractures. It is to prevent inflammatory sequences, due

to splinters forced into the membranes and brain, and to avert the consecutive occurrence of epilepsy and insanity, that the operation should be performed, not because of the fear that symptoms of compression of the brain may arise, nor because necrosis of detached portions of bone may occur.

I am not a believer in the pathology that teaches that the symptoms which we call "compression of the brain" are due to displacing pressure exerted on the brain-substance. How can a slight or even a considerable depression of a limited area of bone produce much pressure upon the brain-substance? How can the usually limited extravasation of blood under the seat of fracture fatally compress the brain, which is of firmer consistence than the blood itself? A rapidly-acting heart, after violent exercise, will throw enough additional blood into the cerebral vessels to produce more intracranial pressure than the ordinary depressed fracture. The complexus of symptoms called compression of the brain may possibly be the result of a disturbance in the local capillary circulation of the membranes and subjacent nervous tissue; but I cannot believe it to be due to compression or displacement of the brain itself. It is more probable that compression symptoms are the results of encephalitis, due to injury from spicules of the inner table, or to the irritation of intracranial bleeding.

As soon as the profession repudiates the idea that brain-displacement is what causes compression symptoms, so soon will every surgeon be convinced that early trephining is a proper exploratory procedure in order to determine what measures are demanded to avert encephalic inflammation.

"Compression of the brain," as seen after injury, should be translated "inflammation of the brain," and looked upon as probably due to unrelieved irritation of the brain-periphery, from traumatic causes. Not until this is so understood will the discussion as to the utility of trephining in depressed fractures cease.

I repeat, then, that trephining is not a therapeutic but an exploratory operation, and, as such, is demanded with much greater frequency than is usually supposed. If it is to be employed for exploratory and diagnostic purposes, early resort thereto needs no defence.

When about to use the trephine itself for perforating the skull, to allow elevation and extraction of fragments, the surgeon should select a small conical instrument: one not over three-eighths of an inch in outside diameter at the cutting end is large enough. Those usually kept by the instrument-makers are too large. It is only necessary to bore an opening sufficiently large to admit the end of the elevator: hence a small trephine is always more proper than a large one, except in those comparatively rare cases where a large disk is to be removed *over* the line of an old depressed fracture. Recently I visited the four princi-

pal instrument-makers of Philadelphia, and could not find in stock any trephine as small as that which I recommend. The belief which has caused trephines to be made so large is founded on an erroneous theory.

In recent depressed fractures the trephine crown should be applied upon the solid bone, and should overlap the *least* depressed edge of the displaced fragment. This allows more ready elevation or extraction by means of the elevator, because the *most* depressed edge is very frequently bevelled, with the inner table broken at a more distant spot, and is thereby wedged under the solid portion of the skull at that side. Elevation at the least depressed edge is effected more readily and with less danger to the brain from the manipulation.

To conclude, I assert that in all subcutaneous injuries of the head with possible existence of depressed fracture, an immediate exploratory incision should be made in the scalp. In all instances of depressed fracture with *possible* existence of splintering and spiculation of the inner table, an immediate exploratory trephining of the skull should be done.

Dr. George W. Vogler read a paper entitled

TWO CASES OF INTESTINAL OBSTRUCTION:
ONE FROM IMPACTED FECES, THE OTHER
BY STRICTURE DUE TO CANCER, WITH SPECIMENS.

Modern writers usually enumerate the causes of intestinal obstruction as follows: 1. Congenital malformation. 2. Internal strangulation. 3. Intussusception or invagination. 4. Constriction. 5. Compression. 6. Impaction of foreign bodies or intestinal concretions. 7. Impaction of fecal masses.

Upon looking through the statistics of intestinal obstructive diseases, certain striking facts are noticeable. It is difficult to estimate the comparative frequency of intestinal obstruction. It is by no means a very common affection, always dangerous, and in a very large proportion of cases resulting fatally. Statistics show that most forms of obstruction of the bowels are more often met with in the male than in the female subject, the exceptions being obstruction by gall-stone or fecal matter, constrictions by peritoneal or other adhesions, and compression of the intestine by tumors or displaced viscera.

As regards age and the portion of the intestine involved:

Obstruction by gall-stones always occurs late in life, and involves the jejunum and ileum. Intussusception may occur at all ages, especially during childhood, and is confined chiefly to the large intestine.

Stricture is a disease of adult life (of course always omitting congenital malformation), involving the large intestine; three-fourths of the total number being below the middle of the transverse colon.

With these few introductory remarks I will proceed at once to the reading of the notes of a case of intestinal obstruction by constriction due to cancer:

Mrs. Mary Müller, German, aged 58 years, widow, was admitted April 18, into the ward of my friend and colleague Dr. Adam Trau, at the German Hospital.

For some six months previous to her admission she had been under almost constant treatment by physicians. She stated that constipation was her chief symptom, for which all kinds of purgative remedies and various procedures were used, with but little avail.

She was anæmic, considerably emaciated, and very weak. Chief symptoms were obstinate constipation, great tympanites, severe pain, and almost incessant vomiting. Temperature and pulse not much disturbed.

A careful physical exploration of the abdomen, vagina, and rectum elicited no sign of a tumor.

A long œsophageal tube was readily passed into the bowel, even to the length of about twenty-seven inches, according to the statement of the medical resident.

In brief, it seemed that the case was one of a paresis of intestinal movement, due to some defect either in the intrinsic ganglia and nerves of the muscular intestinal coat, or through imperfection of the muscular tissue by degeneration, or both these causes combined.

The treatment consisted in the use of purgative remedies, large watery and stimulating enemata, with comparatively no results. Turpentine stupes, followed by hot flaxseed poultices, gave some ease. The introduction of a long œsophageal tube into the bowel, and massage of the abdomen, afforded much relief. So great was the tympanites shortly before her death that respiration was materially interfered with, necessitating the introduction of a small aspirating needle to afford temporary relief.

She was fed by pancreatized milk per bowel, and Cibi's beef extract and stimulants by mouth.

Death occurred April 29, by asthenia.

Owing to the interest taken in the case during life, the following gentlemen were present at the post-mortem examination, by invitation of Dr. Trau: Drs. Formad, Dercum, F. H. Gross, Barton, Jones, Vogler, and the residents, Weed, Stabler, and Rehfuß.

Body emaciated and abdomen greatly distended, the intestinal convolutions plainly mapped out upon the abdominal wall. The distention of the intestines, particularly the colon, was simply enormous. Some adhesions were noted. At the lower part of the descending colon a constriction was seen. This part of the intestine was carefully removed, and when subjected to the hydrostatic test was found to be impervious to a downward current, but readily permitted the passage of an upward current. On opening

the specimen along the line of the mesenteric attachment, a valve-like scirrhus tumor was exposed, which readily accounted for the phenomena observed in life,—viz., 1, ready introduction of fluids into the bowel by a fountain-syringe, also a rectal tube; 2, failure of the fluid to be voided after withdrawal of the tube; 3, an almost total absence of the natural passages from the bowel.

The specimen which I now pass around is well worth a careful inspection, the lesion consisting of two valve-like scirrhus masses completely encircling the bowel, to which it is alone confined.

The other case of intestinal obstruction was due to impacted fæces:

Mrs. F., aged 64, private patient, afflicted for many years with habitual constipation, frequently going many days without an evacuation; commenced complaining some three weeks previous to my visit, with severe pain in the left lumbar and umbilical regions, and an impossibility to relieve the bowels by powerful purgatives.

No other symptom of note troubled her up to within a few days, but now she was suffering with some fever, pain, nausea, exhaustion, and was passing some bloody mucus from the bowels.

Careful examination of abdomen and vagina revealed a large, hard, and irregular-shaped body or tumor, situated in the left lumbar region, painful to the touch, slightly movable, and entirely free from the womb and its appendages.

The diagnosis was determined by the history, the absence of acute symptoms, physical examination, and by the process of exclusion of other causes of obstruction. By this time her life was in great danger.

The treatment consisted chiefly in the frequent use of large enemata of soap-water, castor oil, turpentine, and laudanum.

Small doses of calomel and ipecac were given by the mouth. After two or three days some small and hard pieces of fæcal matter were passed for the first time, and a careful examination indicated the mass to have broken in two, one occupying the old position, the other the sigmoid flexure.

She was vomiting at this time.

The quantity of fæcal matter that came away during the following week was enormous. At one sitting as many as twenty-seven large pieces of hard, dry fæcal matter came away; and I give this merely as an illustration of the quantity passed at one time. Frequently it became necessary to unload the rectum by digging out the masses.

At times bloody mucus came away.

Of course, pain was very great during these operations, and opium had to be resorted to.

Gradually the swellings began to grow less, and finally disappeared. The patient was able to trace their slow movements along the intestines by the intense pain.

Only after weeks of careful treatment did this patient fully recover her health, and, strange to say, with a radical cure of her habitual and long-standing constipation.

GLEANINGS FROM EXCHANGES.

METAPLASIA.—Professor Virchow, at the International Medical Congress, said that in the first half of this century the theories about the different processes of life were chiefly of a chemical nature. The physician then supposed that the nature of the processes of life, both in healthy and sick conditions, was purely chemical. Life was thought to be bound to certain matter, which originally was found in a fluid condition in the body, and specially in the blood, and which, by assuming a solid form, came to constitute the different parts of the body. Even Schwann, in his famous theory of cells, postulated that the cells were formed by a sort of process of crystallization. The doctrine as to the matters from which the tissues were formed came originally from England, from Hewson and John Hunter, who preached the doctrine of plastic lymph. The theories of the Englishmen were made use of in Rokitansky's humoral pathology. But it was not likely that they would have obtained great significance or acceptance if the notion had not been general in physiology of an intercellular humor in the blood, to which Schultze gave the name plasma, and which was looked upon as the principal factor in the processes of generation and nourishment, which then came to be considered as identical. It was thence thought that the art of healing consisted chiefly in regulating the nourishment, and at this it aimed. It was about thirty years ago that he (Professor Virchow) had made the first step towards a true cellular pathology, when he gave forth the sentence, "*Omnia cellula e cellulâ*," by which the necessity for finding a plastema material for the origin of the cells was done away with, and which was viewed as a contrast to the doctrine of cell-formation from plastic matter. The process of nourishment in the fully-developed cell was not identical with the process by which the cell was generated, and there was a manifest difference between nutritive or trophic processes on the one side, and formative or plastic processes on the other. He explained how the task of nourishment was to keep the cell alive, and how the formative process consisted in forming other cells from one pre-existing cell. There was, therefore, a contrast between nutritive or trophic processes and formative or plastical processes. Even if the same matter were used, at one time in nourishing the cell, and at another in forming new cells, it was an organic activity which took place within, and not outside, the cells. He pro-

ceeded to define automatic nourishment, and that change of matter which he called "transit-change," and which consisted in the reception of matter by the several parts of the body, and their giving it up again without using it for nourishment. This term could not be used for the cellular nourishment, with which it had nothing to do. The term plastic he reserved for the forming of new cells. Having thus distinguished nutrition and generation from each other, he proceeded to say that the definition of "growth" was of a more doubtful nature, comprising two widely different series of processes. By hypertrophy they understood the increase of cells in size by taking in new matter, and by hyperplasia, an actual new formation of cells. Having shown a nerve to be growing nutrition, and a blood-vessel formation, he went on to speak of the production of new tissue-forms, of processes that were more allied to the plastic than to the nutritive, and the result of which was a change of the different parts,—that was to say, the formation of new cellular tissue, or metaplasia. The distinctive mark of this process was that the cells kept on living, while the character of the tissue was altered. This metaplasia was the foundation for many important pathological processes, without being itself of a pathological, but of a purely physiological, nature. It was one of the hypotheses underlying Darwinism. What was in the doctrine of embryogeny called "differentiation," and what in the theory of evolution was called "transformation," corresponded in the main with metaplasia. There had not been sufficient distinction made between those processes which tended to form new organisms and those which were destined only to form new tissues. For instance, the formation of bone in no case proceeded directly from the normal cells of the embryo; but first a transition-tissue was formed, and from this, by metaplasia, the bones were made. Proceeding to draw a distinction between calcification and ossification, he said that the question of the nature of the tissue which was converted into bone, whether cartilage or membrane, was not yet fully answered. Yet all agreed that there were to be found, before the formation of the bone began, soft parts, which afterwards came to constitute parts of the bone. Between calcification and ossification it was difficult to maintain a clear distinction. There was a calcified cartilage which was not at all osseous tissue. Moreover, it was very doubtful if, by transformation alone, cartilage could be turned into bone. The difficulty about understanding this question lay in its insufficient discussion. The bone had been examined without regard to how it appeared in life, and the questions of ossification and osteogenesis had been treated in common. Coming to consider the formation of the marrow of the bone, it was, he said, first thought of as a fluid in the cavity of the bone. Now there were distinguished

three different conditions in which the marrow could be seen,—the red, the yellow, and the gelatinous. It was a tissue of changing forms, and was therefore a splendid example of metaplasia. It was formed, after a metaplastic fashion, as the osseous tissue lost its chalky salts, was turned into cartilage-cells, and cavities were formed in the bone for the marrow. If this took place to an unhealthy degree, the process was called osteoporosis, and if to a yet higher degree, osteomalacia. Marrow could, even though it were seldom seen, originate from cartilage, not directly, but through the red marrow, which was rich in cells and which then became yellow marrow (fat-tissue). The osseous tissue, in healthy as well as in unhealthy states, was to a large extent subject to metaplastic transformation. These processes had not yet been thoroughly studied. He had studied the formation of the spongy osseous tissue, and, in its regard, there was no question of a new formation of bone, but only of the formation of marrow. Referring to the white corpuscles of the blood, and the possibility of their forming a new organization, he laid it down that there was a limit to the metaplasia of the leucocytes. Cohnheim, he went on to say, held that all tumors grew from the remains of cells of the embryonic type. But he (Dr. Virchow) believed that many tumors took their origin from much later changes. The known instances of metaplasia occurred chiefly between tissues of the like origin, with a large amount of intercellular substance. There was a difference of opinion as to whether dissimilar tissues could be originated by metaplasia,—whether, for instance, fibrous tissue in the liver could originate from epithelial tissue. Against this it had been said that the epithelial tissues of the embryo originated from other cotyledons than those which gave rise to the fibrous tissue. But he (Dr. Virchow) held the opinion that tumors of epithelial structure could, by this process of metaplasia, originate from fibrous tissue. An experimental method of solving the question had not yet been found, and, without pretending to solve this difficult problem as to the possibility of metaplasia between heterogeneous tissues, he would simply point out that a satisfactory decision was hardly yet possible. —*British Medical Journal*.

INOCULATION OF RABIES.—Pasteur, in an able address before the International Medical Congress, embodied the following brief summary of the results of the Commission appointed to investigate the subject of preventive inoculation for rabies, appointed at his request by the French Government. He presented to the Commission nineteen vaccinated dogs, all of which had been rendered insusceptible by preventive inoculation, and thirteen of which after vaccination had been proved by inoculation by trephining. These nineteen dogs were compared in different ways with nine-

teen dogs chosen from others for the purpose of the experiments. In the first place, on the 1st of June, two of the protected dogs and two of the trial dogs were inoculated by trephining under the dura mater with the bulb from a mad street-dog. On the 3d of June one protected dog and one trial dog were bitten by a mad street-dog. On the 4th of June the Commission made the same mad dog bite another protected and another trial dog. On the 6th of June the mad dog which had been used on the 3d and 4th of June died, and with its bulb three protected dogs and three trial dogs were inoculated by trephining. On the 10th of June the Commission had one protected dog and one trial dog bitten by a fresh mad dog from the streets. On the 16th of June the Commission had two fresh dogs, one protected and one trial dog, bitten by one of the trial dogs of the 1st of June, which had gone mad on the 14th, as a result of the trephining performed on the 1st of June. On the 19th of June the Commission had three protected and three trial dogs inoculated in one of the popliteal veins with the bulb of a mad street-dog. On the 20th of June the Commission also had ten dogs—viz., six protected and four trial dogs, chosen from several others—inoculated in a vein. On the 28th of June, it having been brought to the knowledge of the Commission that a veterinary surgeon, M. Paul Simon, had a mad dog in his hospital, four dogs were brought to it,—viz., two protected and two trial dogs,—in order that it might bite them.

The Commission on rabies has thus performed experiments on thirty-eight dogs, nineteen of which had been supplied by me as insusceptible to rabies, while the other nineteen could be made mad. Those of the dogs which have not died as a result of the experiments are under observation, and will be kept under it for a long time. As to the present condition of the dogs which have been the subject of inquiry, the Commission report that in the case of the nineteen trial dogs, of six which were bitten rabies occurred in three, of seven which were inoculated in a vein it occurred in five, and of five which were inoculated by trephining it occurred in all, while *not a single sign of rabies has shown itself in any of the nineteen vaccinated dogs.*

During the course of the inquiry one of the protected dogs died on the 13th of July from a sanguineous diarrhoea, which first declared itself in the early days of that month. In order to determine whether rabies had any share in its death, three rabbits and one guinea-pig were at once inoculated with its bulb by trephining. All of these four animals are still in the best of health, which is a certain proof that the dog did not die of rabies, but of a common disease.

The next report of the Commission will contain information as to the insusceptibility to rabies of twenty dogs which have been

vaccinated by the Commission itself.—*Medical Times and Gazette.*

THE PREVENTION OF OPHTHALMIA NEONATORUM.—A recent number of the *Archiv für Gynäkologie* (Band xxii. Heft 2) contains an article on this important practical subject, by Dr. G. Krukenberg. Its object is to put before the profession the experience of the obstetric clinic at Bonn with regard to the prophylactic measures recommended by Crédé. During the six years preceding the adoption of these precautions, ophthalmia occurred in 7.3 per cent. of the children born. In February, 1881, prophylactic treatment, after the method of Olshausen, was begun; that is, immediately after the birth of the head the eyelids were washed with a two-per-cent. carbolic acid solution, and the conjunctiva mopped with a similar solution. This was practised till June, 1881, in which period 82 children were born, and 11 of them developed ophthalmia, or 13.4 per cent. This treatment, therefore, was a failure. In June, 1881, the method of Crédé was adopted, with the modification that instead of a two-per-cent. solution of nitrate of silver in water, a vaseline ointment of the same strength was employed. The eyelids were, when possible, washed immediately after the birth of the head with a two-per-cent. solution of carbolic acid, and then the lids opened so widely as to expose the cornea, upon which a piece of the ointment was laid with a glass rod, and the lids then closed. The result has been that out of 703 children born up to November, 1883, only four have suffered from ophthalmia, or 0.56 per cent. In three of these cases Dr. Krukenberg believes that the child was infected subsequent to birth, from the fact that the disease did not appear till the seventh, eighth, and ninth days respectively. If this view be accepted, the percentage of ophthalmia caused during delivery is reduced to 0.14 per cent. The four cases all recovered well without injury to the cornea. Dr. Krukenberg discusses the respective advantages of the vaseline ointment and the watery solution. The vaseline adheres better, but he thinks the watery solution, which has only to be dropped in, safer in the hands of a midwife. Crédé's own results, too, are a trifle better than those at Bonn, and therefore at the latter institution they adopted the solution in place of the ointment. The first case in which the solution was employed developed ophthalmia, which was cured by using the ointment.—*Medical Times and Gazette.*

CHOLERA AND ITS BACILLUS.—Dr. R. Koch recently delivered an address before the Imperial German Board of Health (*Deutsche Medicinische Wochenschrift*), in which he gives a summary of the results of his laborious researches in Egypt, India, and France into the etiology of cholera. The only lesions which could be considered as constant and

peculiar were the modifications in the small intestine. There were some cases in which the lower portion of the small intestine had dark brownish-red coloration, which was most intense just above the ileo-cæcal valve, and there were some points of superficial hemorrhage, and necrotic spots covered with false membrane. In such the contents of the intestine were dark-colored, bloody, and foul-smelling. In others the redness was less intense, and perhaps existed only in patches, or the redness was confined to Peyer's patches and the borders of the follicles, this being a very characteristic appearance. In a few cases, however, the mucous membrane was very little changed, being only a little swollen and less transparent in the surface-layers, the solitary follicles and plaques being more prominent; the whole mucous membrane was pink, but in these cases there were no hemorrhagics. Examined microscopically, corresponding with the redness was found an invasion of bacteria of a peculiar kind, the so-called comma-bacillus associated with the ordinary forms of bacteria in the necrotic and diphtheritic changes of the intestine. These comma-bacilli were found constantly present in the intestinal tract and in the discharges during the attack of cholera. In the reporter's opinion, they were characteristic in appearance, and were present in sufficient numbers to cause the disease. Cultivations on gelatin show this organism to be different from all other bacteria as well by its mode of growth as its microscopical appearances. Thus far no permanent sporule-form has been found; the bacillus itself perishes as soon as it becomes dry. Experiments upon the lower animals have failed both with the cholera excreta and the cultivations, as animals do not seem susceptible to the disease, so that, until some other subject is found to which cholera is obnoxious, the conclusive proof of the identity of the comma-bacilli with the cholera germ will be wanting; but the results thus far are suggestive and valuable. In cases of suspected cholera the presence of the peculiar bacillus in the discharges would at least furnish some evidence of importance to health officers, and suggest the institution of early measures to prevent the spread of the disease.

HÆMOPTYSIS AND ITS TREATMENT.—Dr. Taylor (in the *Lancet*, June, 1884) discusses those cases of hæmoptysis in which there is a suspicion of pulmonary tubercle being present. Pulmonary hemorrhages are grouped under four heads: 1, the hemorrhage of the early stage of phthisis; 2, the hemorrhage occurring when the disease is fairly advanced and is progressing; 3, the profuse hemorrhage of the last stage; 4, those occurring in cases of bronchitis, in "bleeders," in vicarious menstruation, and in mitral valvular disease. As regards treatment, the author states that in many cases he considers there is an undue

precipitancy in employing the astringents usually advocated, and that in the early stage of pulmonary consumption a small amount of hemorrhage has been rather beneficial than otherwise. A blood-spitting at this period is merely a method to alleviate a congested apex. Consequently it is a congestion that has to be combated, not the subsequent hemorrhage. The best treatment in these cases is to attend to the patient's general health, ordering moderate exercise without fatigue. As regards climate, the author considers a residence in the high lands around Buxton and the Derbyshire Peak to be highly beneficial; whilst Bournemouth, Hastings, etc., are too relaxing. In cases where the pulmonary hemorrhage is severe, it is better to give a good purgative than to rely on large doses of gallic acid, etc. An ice-bag placed on the chest is considered valueless, but the opposite line of treatment is highly recommended,—viz., the application of hot flannels over the angles of the ribs from the summit to the base of the thorax,—i.e., over the sympathetic ganglia. Turning to medicinal remedies, the chief drug which the author relies upon is opium, this acting like a charm if given alone and in sufficient quantities. Should the hemorrhage be very profuse, digitalis may be added in doses of fifteen to twenty minims of the tincture. When opium is contra-indicated, then oil of turpentine or the liquid extract of ergot are said to be useful.—*London Medical Record*.

THE COMMUNICATION OF TUBERCULOSIS BY FOOD, AND THE DIMINUTION OF THE PATHOGENIC ACTIVITY OF TUBERCLE-BACILLI BY PUTREFACTION.—Baumgarten (*Centralbl. für die Med. Wiss.*, 1884, No. 2) has attempted to settle the vexed question whether tubercle-bacilli introduced into the organism with food, as in the milk of tubercular cows (which in animals suffering from tuberculosis of the udder has been proved by Bollinger to contain tubercle-bacilli), can produce tuberculosis. He experimented by mixing tubercle-bacilli with fresh milk and feeding young rabbits with this, and he found that the constant result was tuberculosis of the intestinal mucous membrane, the mesenteric glands, and the liver. The intensity of the tuberculosis was in direct proportion to the quantity of bacilli in the milk. A few tubercular nodules were found in the lungs. From his earlier experiments he had been led to the conclusion that post-mortem putrefactive processes destroyed or weakened the virulence of the bacilli. In order to determine whether the putrefactive process (sepsis), *per se*, hindered the development of tuberculosis, he mixed tubercle-bacilli with a virulent inflammatory putrefactive fluid, and found that local and general tuberculosis resulted from the introduction of this into the anterior chamber of the eyes of animals. He therefore thinks

that, although the *prolonged* contact with putrefactive processes weakens the activity of the bacilli, the septic process within the organism does not antagonize the development of tuberculosis. This conclusion is opposed to that of Falk; and he points out that the observation of Falk, that animals infected with pus taken from the local tubercular lesions produced by tubercular virus so weakened acquired general tuberculosis, is opposed to his view that the virus was really diminished in intensity, as in that case we should expect that the second series of animals should develop local, or at least modified, tuberculosis. —*London Medical Record*.

MENTAL ELEMENT IN GOUT.—Dr. J. Mortimer Granville calls attention in the *Lancet* (August 16) to the clinical fact that an attack of gout is particularly liable to occur in the gouty subject at either of two mental or cerebral crises: on the eve of a great mental effort, when the brain is at its highest tension, or after an intellectual effort, when the centres are exhausted. In the former case the attack is severe and accompanied by neuralgic pains, in the latter it may take the form of an epileptic fit or syncope, followed by more or less prolonged depression, or it may rapidly develop into a formulated arthritis of the ordinary type. In the former there is present a neurosis which calls for special treatment after the paroxysm is over.

In all forms of gout Dr. Granville has given the following formula with such success that he recommends its trial by others. He never gives colchicum.

R Ammonii chloridi, ℥iv;
Potassii chloratis, ℥ii;
Glycerini, f℥xii;
Tincturæ iodini, f℥ii;
Aquam ad f℥xii.—M.

Dose.—Two tablespoonfuls four to eight times daily.

THE CONNECTION OF ACUTE DIABETES WITH DISEASE OF THE PANCREAS.—Dr. Duffey has reported (*Dublin Journal of Medical Science*) a case of acute diabetes in a countryman, aged 24, which terminated fatally by coma after a course of seven weeks, and in which at the post-mortem examination the pancreas was found to be hypertrophied and indurated, presenting under the microscope, according to Mr. Abraham, the appearance of carcinoma. Dr. Duffey, while admitting that the connection between pancreatic disease and diabetes is yet quite obscure, draws attention to the statements of Lancereaux and Depierre, that it is especially in acute diabetes, the *diabète maigre* of the former author, that pancreatic lesions are met with. —*London Medical Record*.

ANTIPYRESIS BY INUNCTION.—Dr. Colbat urges a return to the old method of Schneemann of inunctions with fat or vaseline in

the febrile diseases of childhood. He uses cerate or vaseline in scarlatina, variola, broncho-pneumonia, and other pyretic conditions, and states that it reduces the temperature and induces a condition of restfulness. He denies that there is any danger of blood-poisoning in the employment of these inunctions. — *Med.-Chirurg. Correspondenz-Blatt*, May, 1884.

CHRONIC SUPPURATION OF THE MIDDLE EAR, WITH PERFORATION.—Dr. John F. Fulton (in the *Northwestern Lancet*) recommends the boric acid treatment, the powdered acid being applied on absorbent cotton directly to the perforation in the drum-head, and changed night and morning. He prefers the dry method, and rarely uses the syringe. He has met with a case in which there was undoubted basilar meningitis complicated by double optic neuritis, which made a perfect recovery.

MISCELLANY.

MR. LAWSON TAIT, of Birmingham, delivered a clinical lecture at the Jefferson Medical College on the 15th instant, which will appear in our next issue. He received marked attention while in this city from the Obstetrical Society, as well as from individual members of the profession. He sails for Europe on the 20th, much pleased with his visit to his American cousins.

HOME CRITICISMS OF THE AMERICAN INSTITUTE OF HOMŒOPATHY.—The *New York Medical Times* (homœopathic, in a measure) charges the American Institute of Homœopathy with being a machine-ridden and obsolete institution, which has outlived its usefulness. It calls upon it to renounce its title or disband, and states, what is now very well known, that "homœopathic colleges," "homœopathic publishers," "homœopathic pharmacies," etc., cling to their distinctive name because it is a trade-mark without which they would become extinct. When the leading homœopathic (we beg its pardon) journal of the country talks in this bold way, we opine that the end is near. Homœopathy should be taught in all medical colleges as a branch of historical medicine or psychological therapeutics. In that direction matters are rapidly tending. —*Medical Record*.

SIR ERASMUS WILSON capped his former bequest of five thousand pounds to the English College of Surgeons by a bequest of one hundred and eighty thousand pounds. This windfall to the college represents about seven thousand pounds a year, and puts it in possession of a grand opportunity of distinguishing itself and benefiting at once surgery and the public. —*Medical Press and Circular*.

NOTES AND QUERIES.

SALIVATION FROM CORROSIVE SUBLIMATE DRESSINGS.

PHILADELPHIA, September 6, 1884.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

In an article in the *Times* of this date by Dr. Charles Meigs Wilson, on "Antiseptic Dressings of Mercuric Bichloride," there is the following statement:

"The other case was that of a hospital nurse, who, in order to get a holiday, simulated mercurialism, but a careful investigation showed that he was feigning."

The "Residents" who have served in the Pennsylvania Hospital for a number of years past, and others familiar with the house, will be surprised to learn that this school-boy trick, shamming sick to get a holiday, is attributed to the faithful and efficient head-nurse of the lower surgical ward.

They will wonder with me that in a purely scientific article an attempt is made to weaken the force of an objection by casting a slur on the character of a worthy man, rather than using the apparent exception as a means of further study on an important subject.

Drs. R. J. Levis and R. H. Harte both assure me that at the time referred to the nurse was unmistakably salivated, and he had to use soft food for nearly a week.

The relation between officers and employés of this Hospital is not such as to require either real or "sham" sickness to procure a holiday.

No release from ordinary duties was asked for in this case, except from handling the dressing. It is my impression that Dr. Wilson himself proposed this; but it received his hearty approval.

Respectfully,
RICHARD CADBURY,
Steward.

PRIZE OPEN TO UNIVERSAL COMPETITION.

THE Cartwright prize of the Alumni Association of the College of Physicians and Surgeons of New York is open to the competition of alumni of any medical college.

It consists of a prize of *five hundred dollars*, to be awarded to the best medical essay submitted upon any subject the writer may select. The award will be paid as soon as the successful article shall have appeared in print.

If no one of the competing essays be deemed sufficiently meritorious, the prize is not awarded. An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

An award of this prize will be made at commencement, 1885. Essays must be sent to a member of the prize committee before April 1, 1885.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

Prize Committee on Essays.	{	R. W. AMIDON, M. D., <i>Chairman</i> ,
		18 W. Twenty-First Street.
		ROBERT ABBE, M. D.,
		32 E. Twenty-Fifth Street.
		WALTER MENDLSON, M. D.,
		209 W. Forty-Sixth Street.

OBITUARY.

DR. ROBERT EMPIE ROGERS, Emeritus Professor of Chemistry in the Jefferson Medical College, Philadelphia, died in Philadelphia rather suddenly on the 6th of the present month. He was born in Baltimore, Maryland, and was graduated in medicine at the University of Pennsylvania in 1836. In 1844 he was elected Professor of Chemistry in the University of Virginia, and in 1852 succeeded his brother, Dr. J. B. Rogers, as Professor of Chemistry in the University of Pennsylvania, a position which he held until 1877, when he accepted the same chair in the faculty of the Jefferson Medical College. He resigned the duties of this position only a few weeks before his death, on account of his failing health.

PROF. COHNHEIM died at Leipsic, August 14, of gout complicated with disease of the kidneys, in the forty-sixth year of his age. He was one of Virchow's pupils, and was his assistant from 1864 to 1868 in the Berlin Pathological Institute. He was subsequently appointed Professor of Pathology at Kiel and at Breslau. In the latter place he made his celebrated experiments upon blood-vessels and the migration of the blood-cells in inflammation. In 1876 he succeeded Wagner at Leipsic as Professor of General and Pathological Anatomy, which position he held at the time of his death.

Dr. BURO, of Paris, who became famous in connection with metallo-therapy, of which he may be considered the founder, and whose theories as to the efficacy of copper as a preventive and cure for cholera obtained a wide circulation, has just died at Bièvres, in the sixty-third year of his age.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 31, 1884, TO SEPTEMBER 13, 1884.

BYRNE, CHARLES C., MAJOR AND SURGEON.—Relieved from duty in Department of California, and to report in person to the commanding general, Department of the Platte, for assignment to duty. S. O. 207, A. G. O., September 3, 1884.

TOWN, F. L., MAJOR AND SURGEON.—Relieved from duty in Department of the Columbia, and to report in person to the commanding general, Department of Texas, for assignment to duty. S. O. 207, c. s., A. G. O.

GREENLEAF, CHARLES R., MAJOR AND SURGEON.—To conduct a detachment of recruits to the Department of the Columbia, and, upon completion of this duty, to rejoin his station, Columbus Barracks, Ohio. S. O. 210, A. G. O., September 6, 1884.

HAVARD, VALLEY, CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in Department of Texas, and to report in person to the commanding general, Department of the East, for assignment to duty. S. O. 207, c. s., A. G. O.

HALL, WILLIAM R., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in Department of Texas, and to report in person, on October 1, 1884, to the superintendent general recruiting service in New York city, for duty at David's Island, New York, relieving Assistant-Surgeon M. E. Taylor from duty at that station. S. O. 207, c. s., A. G. O.

GORGAS, W. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Randall, Dakota Territory. S. O. 98, Department of Dakota, September 5, 1884.

HOPKINS, WILLIAM E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The leave of absence granted him in S. O. 67, August 7, 1884, Department of Arizona, is extended one month. S. O. 204, A. G. O., August 30, 1884.

EGAN, P. R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Fisher, to report at Fort Lowell, Arizona Territory, for duty as post surgeon. S. O. 82, Department of Arizona, September 2, 1884.

MACAULEY, C. N. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Sisseton, Dakota Territory. S. O. 99, Department of Dakota, September 6, 1884.

FISHER, W. W. R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Apache, Arizona Territory, relieving Assistant-Surgeon Egan. S. O. 82, c. s., Department of Arizona.

EWING, CHARLES B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon at Fort Stanton, New Mexico. S. O. 177, Department of the Missouri, September 6, 1884.

MCCAW, WALTER D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON (recently appointed).—To report in person to the commanding general, Department of the Missouri, for assignment to duty. S. O. 209, A. G. O., September 5, 1884.

WOODWARD, J. J., MAJOR AND SURGEON.—Died August 17, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM AUGUST 31, 1884, TO SEPTEMBER 13, 1884.

P. A. Surgeon P. M. RIXEY, from special duty at Washington, D. C., September 8, and to the "Lancaster," European squadron.

Surgeon A. S. OBERLY, from the "Richmond," August 30, and wait orders.

P. A. Surgeon S. H. DICKSON, from Asiatic squadron, July 29. Sick-leave August 30, 1884.

Surgeon T. C. HEYL, September 8, 1884, from the "Adams," and to the R. S. "Independence," Mare Island, California.

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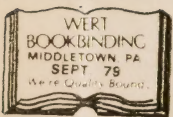
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